A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VAATHAM

Dissertation submitted to
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(For the partial fulfillment of the degree**)**
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DOCTOR OF MEDICINE
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October - 2017

DECLARATION BY THE CANDIDATE

I hereby declare that this Dissertation entitled ***"A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VAATHAM"*** is a bonafide and genuine research work carried out by me under the guidance of **Dr.G.J.Christian** M.D(S), HOD, Dept of Noi Naadal, National Institute of Siddha, Chennai – 47, and the dissertation has not formed the basis for the award of any degree, Diploma, Fellowship or other similar title.

Place: Chennai – 47 Signature of the Candidate

Date:

(Dr.K.Kanchana)

BONAFIDE CERTIFICATE

Certified that I have gone through the dissertation submitted by **Dr. K.Kanchana (Reg.No: 321415202)** a student of final year M.D(s), Branch-V, Department of **Noi Naadal, National Institute of Siddha**, Tambaram Sanatorium, Chennai - 47, and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

Place: Chennai - 47

Date:

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with seal

Name and Signature of the Director
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- This dissertation is one of the milestones in the journey of my professional carrier as it is the key program in acquiring my MD SIDDHA degree. Thus I came across this task which kept on completed with the support and encouragement of numerous people. So I take great pleasure in thanking all the people who made this dissertation study a valuable and successful one, which I owe to treasure it.

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1.INTRODUCTION

Siddha system is one of the ancient systems of medicine in our country. The word SIDDHA comes from the word "SIDDHI" which means to attain perfection in life. Siddhars are the forerunners of this system who attained Siddhi.

Siddhars realized the importance of the body in which the individual soul resides. Therefore a healthy body is essential for a healthy mind .Our body is based on ninety six thathuvas (principle)and the study of truth (Thathuvam) about the body (Udal thathuvam), mind (Manothathuvam) and soul (Anma thathuvam); is indispensable for those who want to lead a spiritual life aiming at liberation of the Soul.

The unique nature of this Siddha system is to maintain the physical, mental and spiritual health. Siddha system have four major subjects Vatham(Alchemy),Yogam, Gnanam and Vaidyam. The aim of Siddha medicine is not only to cure diseases of the body and the mind, but also the soul thereby bestwind. Immortality or eternal life is the heavenly life of eternal bliss. It is otherwise called Mukthi (Salvation).

The Siddhars school of thought fully recognises these Ninety six thathuvas and further add that the human body is composed of 72,000 blood-vessels, 13,000 nerves ,10 main arteries ,10 vital airs all together in the form of a network.

The universe is made up of five element theory likewise the human body constituents made by Five element theory, Seven physical constituent and three humors theory. In which the three humors namely Vaatham, Pitham, Kapham has the functions of Creation , Protection, Destruction respectively.

The normal order of Vatha, Pitha and Kapha are in the proportions of magnitude of 1Mathirai:1/2 Mathirai:1/4 Mathirai respectively.

Any derangement in the three humors and seven physical constituents cause the illness to the body .Cause the illness not only to the body and also the mind.

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The factors assumed to affect this equilibrium are environmental, climatical, dietary, physical activities and of stress.

Food habits and life style modification play a major role in developing the disease because the abnormal physical activities may disturb the level of the three basic humours leading to disease.

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The diagnosis is made by observing,

1.The five sense organ (Nose,Tongue,Eye,Ear,Skin)

2.The five senses (Smell,Taste,Vision,Touch,Sound)

3.Interrogation

There are Eight kind of diagnostic techniques in Siddha system. They are Naadi, Sparism, Naa, Niram, Mozhi,Vizhi, Malam and Moothiram. Siddhars developed one of the aspects of diagnosis and prognosis of diseases by reading the pulse.

Siddhars classified the diseases into 4448 based on three humours theory. Among them Vatha diseases are 80, Pitha diseases are 40 and Kapha diseases 20 in number.

Mirutthu vatham is one among the 80 types of Vatha diseases. It is characterised by abdominal discomfort, constipation, diarrhoea, fatigue, dropsy, weariness of limbs and anxiety. The signs and symptoms of Mirutthu vaatham mentioned in Siddha literature closely correlated with that of Irritable bowel syndrome in the modern disease of classification of disease.

Irritable bowel syndrome is one of the common gastro intestinal ailments condition which affects 20% of the general population. This condition is found commonly in women and their prevalence peaks above in the 20-50 years of age group. Only 10% of people consult their doctors because of gastro intestinal symptoms. The present study revealed Nilam, Seasonal variations, Udaliyal, Envagai thervu, Iymporikal, Kanmenthiriyangal and Manikadai nool of every patient included in the trial.

2.AIM & OBJECTIVE

2.1.AIM:

To evaluate the diagnostic methodology and symptomatology for “Mirutthu Vaatham” through Envagai thervu, Kaalam, Nilam and Manikadai Nool.

2.2.OBJECTIVES:

- To collect literary evidences about Mirutthu Vaatham.
- To study the detailed etiological factors of Mirutthu Vaatham .
- To find out the changes of Udal Thathu and Uyir Thathu.
- To analyse the signs and symptoms of Mirutthu Vaatham .
- To correlate the symptoms of Mirutthu Vaatham with that of closely resembling conditions in modern medical literature.
- To have an idea of incidence of the Mirutthu Vaatham with reference to sex, age and habit.
- To standardize the line of treatment for Mirutthu Vaatham .
- To recommend a dietary regimen for Mirutthu Vaatham .

3.A.SUGARA NILAI IN SIDDHA MEDICINE (PHYSIOLOGY)

The five basic elements, namely Aagayam (Space), Kaal (Air), Thee (Fire), Neer (Water), and Maan (Earth) are the building blocks of all the physical and subtle bodies existing in this whole universe. These are called as the ‘Adippadai boothams’ (Basic Elements) (or) ‘Panchaboothams’.

These five elements together constitute the human body and origin of other material objects are explained as Pancheekaranam (Mutual Intra Inclusion). None of these elements could act independently by themselves. They could act only in co-ordination with other four elements. All the living creatures and the non-living things are made up of these five basic elements.

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As per the above lines, the universe and the human body are made of five basic elements.

A.THE 96 BASIC PRINCIPLES (96 THATHUVAM):

According to siddha system of medicine, ‘Thathuvam’ is considered as a science that deals with basic functions of the human body. Siddhars described 96 principles as the basic constituents of human body that include physical, physiological, psychological and intellectual components of an individual. These 96 Thathuvams are considersd to be the cause and effect of our physical and mental well-being. The Thathuvamis the author of the conception of human embryo on which the theory of medicine is based

1. **BOOTHAM – 5 (ELEMENTS):**
    - Man - Earth
    - Neer - Water
    - Thee - Fire
    - Vaayu - Air
    - Aagayam - Space

2. **PORI -5 (SENSORY ORGANS):**
    - Mookku (Nose) - It is a component of Man bootham
    - Naakku (Tongue) - It is a component of Neer bootham
    - Kan (Eye) - It is a component of Thee bootham
    - Thol (Skin) - It is a component of Vaayu bootham
    - Kadhu (Ear) - It is a component of Aagayam bootha

3. **PULAN -5 (FUNCTIONS OF SENSORY ORGANS):**
    - Nugarthal - Smell : It is a component of Man bootham
    - Suvaithal - Taste : It is a component of Neer bootham
    - Paarthal - Vision : It is a component of Thee bootham
    - Thoduthal - Touch : It is a component of Vaayu bootham
    - Kettal - Hearing : It is a component of Aagayam bootham

4. **KANMENTHIRIYAM – 5 (MOTOR ORGANS):**
    - Vaai (Mouth) - The speech occur in relation with Space element
    - Kaal (Leg) - The walking take place in relation with Air element
    - Kai (Hands) - Giving and taking are carried out with Fire element
    - Eruvai (Rectum) - The excreta is removed in association with Water element
    - Karuvai (Genital organ) - Sexual acts are carried out in association with Earth elemant

5. **KARANAM – 4 (INTELLECTUAL FACULTIES)**
    - Manam – Thinking about a thing
    - Bhuddhi – Deep thinking or analyzing of the thought
    - Siddham – Determination to achieve it
    - Agankaaram – Achievement faculty

6. **ARIVU – 1 (WISDOM OF SELF REALIZATION)**

7. **NAADI -10 (**Channels of Life Force responsible for the Dynamics of Pranan**)**
    - Idakalai – Starts from the right big toe and ends at the left nostril.
    - Pinkalai – Starts from the left big toe and ends at the right nostril.
    - Suzhimunai – Starts from moolaathaaram & extend upto centre of head.
    - Siguvai – Located at the root of tongue, helps in swallowing food.
    - Purudan – Located in right eye.
    - Kanthari – Located in left eye.
    - Aththi – Located in right ear.
    - Alambudai – Located in left ear.
    - Sangini – Located in genital organs.
    - Gugu – Located in anoretal region.

8. **VAAYU – 10 (**Vital nerve force which is responsible for all kinds of movements**)**
    i. **PRANAN (UYIR KAAL):**
    This is responsible for the respiration of the tissues, controlling knowledge, mind and five sense organs and digestion of the food taken in.
    ii. **ABANAN (KEEL NOKKU KAAL):**
    It lies below the umbilicus. It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation.
    iii. **VIYANAN (PARAVU KAAL):**
    This is responsible for the motor and sensory functions of the entire body and the distribution of nutrients to various tissues.
    iv. **UTHANAN (MAEL NOKKU KAAL):**
    It originates at utharakini. It is responsible for digestion, absorption and distribution of food. It is responsible for all the upward movements.

v. **SAMANAN (NADUKKAL):**

This is responsible for the neutralization of the other 4 vallis i.e. Pranan, Abanan, Viyanan and Uthanan. Moreover it is responsible for the nutrients and water balance of the body.

vi. **NAAGAN:**

It is a driving force of eye balls and responsible for their movements.

vii. **KOORMAN:**

It is responsible for the opening and closing of the eyelids and also vision. It is responsible for yawning.

viii. **KIRUKARAN:**

It is responsible for the salivation of the tongue and also nasal secretion. Responsible for cough and sneezing and induces hunger.

ix. **DEVATHATHAN:**

This aggravates the emotional disturbances like anger, lust and frustration etc. As emotional disturbance influence to a great extent the physiological activities, it is responsible for the emotional upsets.

x. **DHANANCHEYAN:**

Expelled 3 days after the death by bursting out of the cranium. It is responsible for edema, plethora and abnormal swellings in the body in the pathological state.

9. ASAYAM – 5 (VISCERAL CAVITIES):

- **Amarvasayam** (Reservoir organ): Stomach (digestive organ). It lodges the ingested food.
- **Pakirvasayam** (Digestive site): Small intestine. The digestion of food separation and absorption of saaram from the digested food are done by this asayam.
- **Malavasayam** (Excretory organ for the solid waste): Large Intestine, especially rectum. Responsible for the expulsion of undigested food parts and flatus.
- **Salavasayam** (Excretory organ for the liquid waste): Urinary bladder, kidney. Responsible for the formation and excretion of urine.
- **Suckilavasayam** (Genital organs): Place for the formation and growth of the sperm and ovum.

10. KOSAM – 5 (FIVE STATES OF THE HUMAN BODY OR SHEALTH):

- Annamaya Kosam – physical Sheath (Gastro intestinal system)
- Prnamaya Kosam – Respiratory Sheath (Respiratory system)
- Manomaya Kosam – Mental Sheath (Cardio vascular system)
- Vignanamaya Kosam – Intellectual Sheath (Nervous system)
- Ananthamaya Kosam – Blissful Sheath (Reproductive system)

11. AATHARAM – 6 (STATIONS OF SOUL):

- **MOOLADHARAM :**

  Situated at the base of the spinal column between genital organ and anal orifice. Letter “Xk” is inscribed.

- **SWATHITANAM :**

  Located 2 finger above the Mooladharam, (i.e) between genietal and naval region. Letter “e” is inscribed. Earth element attributed to this region.

- **MANIPOORAGAM :**

  Located8 finger above the Swathitanam, (i.e) at the naval center. Letter “k” is inscribed. Element is Water.

- **ANAKATHAM :**

  Located 10 finger above Manipooragam, (i.e) location of heart. Letter “rp” is inscribed. Element is Fire

- **VISUTHI :**

  Located 10 fingers above the Anakatham (i.e) located in throat. Letter “t” is inscribed. Element is Air.

- **AAKINAI :**

  Located between two eyebrows. Element is Space. Letter “a” is inscribed.

12. MANDALAM- 3 (REGIONS):

- **Thee Mandalam** (Agni Mandalam)

  Fire Region, found 2 fingers width above the Mooladharam.

- **Gnayiru Mandalam** (Soorya Mandalam)

  Solar Region, located with 4 fingers width above the umbilicus.

- **Thingal Mandalam**(Chandra Mandalam)

  Lunar Region, located at the center of two eye brows.

13. MALAM – 3 (THREE IMPURITIES OF THE SOUL):

- **AANAVAM :**

  This act makes clarity of thought, knowing power of the soul, yielding to the Egocentric consciousness like 'I' and 'Mine' considering everything is to his own.

- **KANMAM :**

  Goes in collusion with the other two responsible for incurring paavam (the Sin) and Punniyam (virtuous deed).

- **MAYAI :**

  Climbing ownership of the property of someone else and inviting troubles.

14. THODAM – 3 (THREE HUMOURS) :

- **VALI (VATHAM) :**

  It is creative force, formed by Vaayu & Aakaya bootham.

- **AZHAL (PITHAM)**

It is protective force, formed by Thee bootham

- **IYYAM (KABAM)**

  It is destructive force, formed by Mann & Neer bootham

15. EADANAI - 3 (PHYSICAL BINDINGS) :

- **Porul patru** - Material Bindings
- **Puthalvar patru** - Offspring Bindings
- **Ulaga patru** - Worldly Bindings

16. GUNAM – 3 (THREE COSMIC QUALITIES) :

- **Sathuva Gunam (*Characters of Renunciation or Ascetic Virtues*) :**

  The grace, control of sense, wisdom, penance, generosity, excellence, silence and truthfulness are the 8 traits.

- **Raso Gunam (*Characters of Ruler*) :**

  Enthusiasm, wisdom, velour, virtue, offering gift, art of learning and listening are the 8 traits.

- **Thamo Gunam (*Carnal and Immoral Characters*) :**

  Immortality, lust, killing laziness, violation of justice, gluttonousness, falsehood, forgetfulness and fraud

17. VINAI – 2 (ACTS) :

- **Nalvinai -** Good Acts
- **Theevinai -** Bad Acts

18. RAGAM – 8 (THE EIGHT PASSIONS) :

- Kaamam – Desire
- Kurotham – Hatred
- Ulobam – Stingy
- Moham – Lust (Intense or Sexual desire infatuation)
- Matham – Pride (The feeling of respect towards yourself)
- Marcharyam – Internal conflict
- Idumbai – Mockery
- Ahankaram – Ego

19. AVATHAI – 5 (FIVE STATES OF CONSCIOUSNESS) :

- **NINAIVU**

  Wakefulness with the 14 karuvikaranathigal (5 pulan, 5 kanmaenthiriyam and4 karanam) and feels the good and sad things.
- **KANAVU**

  Dreams. In these 10 karuvi karanathigal (5 pulan, 5 kanmaenthiriyam) exceptkaranam present in the neck.
- **URAKKAM**

  Sleep. The state in which hearing and seeing can’t explained to others. The respiration present in the heart.
- **PERURAKKAM**

  Repose (Tranquil or Peaceful State). The seevaanma stands in the naabi, Producing the respiration.
- **UYIRPADAKKAM**

  Oblivious of Surroundings. The seevaanma goes to moolathaaram and produceinsensibility.

THE UYIR THATHUKKAL :

The physiological units of the Human body are **Vali** (Vatham), **Azhal** (Pitham) and**Iyyam** (Kabam). They are also formed by the combination of the five elements.

Vaatham = Vali+Aagayam : Creative force

Pitham = Thee + Force of preservation

Kabam = Man+Neer : Destructive force

As per the above lines the Universe and the human body are made of fiveelements. These three humours are in the ratio 1:½:¼ in equilibrium or Normalcondition, they are called as the Life forces.

SITES OF UYIR THATHUKKAL :

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THE FORMATION OF UYIR THATHUKKAL :

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Vali = Abanan + Idagalai
Azhal = Piranan + Pinkalai
Iyyam = Samanan + Suzhimunai

I.VALI (VATHAM) :

a) THE NATURE OF VALI :

Vali is soft, fine and the temperature (coolness and hotness) could befelt by touch.

b) SITES OF VALI :

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According to Vaithya sathakam, vali dwells in the following places: They are Umbilicus, rectum, faecal matters, abdomen, anus, bones, hip joint, navel plexus, joints, hair follicle and muscles.

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- ħ¸¢ ÓÉ¢Å÷

According to Sage Thirumoolar and Yugi muni, the places of vatham are the anus and below the naval region.

c) THE PROPERTIES OF VALI :

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Å¡¸ñ¢ì Ì õ Á¡ó¾÷ì Ì Å¡Ô"

- º¢ò¾ ÁÕòÐÅ¡ í ¸ ÍÕ ì ¸õ

d) THE FUNCTIONS OF VALI :

1. To stimulate the respiration
2. To activate the body, mind and the intellect.
3. To expel the fourteen different types of natural reflexes.
4. To activate seven physical constituents in functional co- ordination.
5. To strengthen the five sense organs.

In the above process vatham plays a vital role to assist the body functions.

II. AZHAL (PITHAM) :

a) THE NATURE OF AZHAL :

The nature of Azhal is atomic. It is sharp and hot. The ghee becomeswatery, salt crystallizes and jaggery melts because of heat. The heat ofAzhal is responsible for many actions and their reactions.

b) SITES OF AZHAL :

According to vaithiya sathagam, the pingalai, urinary bladder,stomach, stomach and heart are the places where Azhal sustains. Inaddition to the above places, the umbilicus, epigastria region, stomach,sweat, saliva, blood, essence of food, eyes and skin are also the placeswhere Azhal sustains. Yugi muni says that the Azhal sustains in urineand the places below the neck.

c) THE PROPERTIES OF AZHAL :

Azhal is responsible for the digestion, vision, maintenance, of the bodytemperature, hunger, thirst, taste etc. Its other functions includethought, knowledge, strength and softness.

d) THE FUNCTIONS OF AZHAL :

1. Maintenance of body temperature.
2. Produces reddish or yellowish colour of the body.
3. Produce heat energy on digestion of food.
4. Produces sweating.
5. Induces giddiness.
6. Produces blood and the excess blood are let out.
7. Gives yellowish coloration to the skin, eyes, faeces and urine
8. Produce anger, heat, burning sensation, inaction and determination.
9. Gives bitter or sour taste.

e) THE TYPES OF AZHAL :

1. Aakkanal – Anal pitham or Pasaka pitham – The fire of digestion.

It lies between the stomach and the intestine and causes digestion and dries up the moist ingested substance.

2. Vanna eri – Ranjaga pitham – Blood promoting fire.

The fire lies in the stomach and gives red colour to the chyme and produces blood. It improves blood.

3. Aatralanki – Saathaga pitham – The fire of energy.

It gives energy to do the work.

4. Nokku Azhal – Alosaga pitham – The fire of Vision.

It lies in the eyes and causes the faculty of vision. It helps to visualize things.

5. Ul oli thee – Prasaka pitham – the fire of brightness.

It gives colour, complexion and brightness to the skin.

III. IYYAM (KABAM) :

a) THE NATURE OF IYYAM :

Greasy, cool, dull, viscous, soft and compact are the nature of Iyyam.

b) THE SITES OF IYYAM :

Head, tongue, eyes, nose, throat, thorax, bone, bone marrow, joints, blood, fat, sperm and colon are the seats of Iyyam. It also lies in the stomach, spleen, the pancreas, chyle and lymph.

c) THE PROPERTIES OF IYYAM :

Stability, greasiness, formation of joints, the ability to withstandhunger, thirst, sorrow and distress are the qualities. It also helps towithstand sufferings.

d) THE FUNCTIONS OF IYYAM :

Greasiness, strength, roughness, knowledge, cool, growth, heaviness of bone, restriction of joint movements, pallor, indigestion, deep sleep and to have a sweet taste in tongue are the function of Iyyam. The skin, eyes, faces and urine are white in colour due to the influence of Iyyam.

e) THE TYPES OF IYYAM :

1. **Ali iyyam – Avalambagam:**

   Heart is the seat of Avalambagam. It controls all other types of Iyyam.

2. **Neerpi iyyam – Kilethagam :**

   Its location is stomach. It gives moisture & softness to the ingested food.

3. **Suvai kaan iyyam – Pothagam :**

   Its location is tongue. It is responsible for the sense of taste.

4. **Niraivu iyyam – Tharpagam :**

   It gives coolness to the vision.

5. **Ondri iyyam – Santhigam :**

   It gives lubrication to the bones particularly in the joints.

THE UDAL THATHUKKAL (PHYSICAL CONSTITUENTS) :

Udal Thathukkal is the basic physical constituents of the body. They are also constituted by the Five Elements.

1. **Saaram :**This gives mental and physical perseverance.
2. **Senneer:** Imparts colour to the body and nourishes the body.
3. **Oon :**It gives shape to the body according to the physical activity and cover the bone.
4. **Kozhuppu :**It lubricates the joints and other parts of the body to function smoothly.
5. **Enbu :**Supports the frame and responsible for the postures and movements of the body
6. **Moolai :**It occupies the medulla of the bones and gives strength and softness to them.

7. **Sukkilam/Suronitham :**It is responsible for reproduction. These are the seven basic constituents that form the Physical Body. The Bonesare predominantly formed by the Earth component, but other elements are alsopresent in it. All the three humuors Vali, Azhal and Iyyam present in this 7constituents.

The intake food converted to udal thaadhu in which the intake food isconverted to saaram in the first day, and then it converted to chenneer in the secondday, oon, kozhuppu, enbu, moolai and sukkilam/ Suronitham respectively in thefollowing days. So in the seventh day only the intake food goes to thesukkilam/suronitham.

UDAL THEE (FOUR KINDS OF BODY FIRE) :

There are four kinds of body fire. They are Samaakkini, Vishamaakkini, Deekshaakkini and Manthaakkini.

1. **SAMAAKKINI (BALACED DIGESTIVE FIRE) :**

   The digestive fire is called as Samaakkini. This is constituted by Samana Vayu, Anala Pitham and Kilethaga Kapham. If they are in normal proportion then it is called as Samakkini. It is responsible for the normal digestion of the food.

2. **VISHAMAAKKINI (TOXIC DIGESTION) :**

   Due to deranged and displaced Samana Vayu, it takes a longer time for digestion of normal food. It is responsible for the indigestion due to slowdigestion.

3. **DEESHAKKINI (ACCENTUATED DIGESTION) :**

   The samana vayu rounds up the Azhal, which leads to increased Anala Pitham, so food is digested faster.

4. **MANTHAAKKINI (SLUGGISH DIGESTION) :**

   The samana vayu rounds up the Iyyam, which leads to increased Kilethaga Kapham. Therefore food is poorly digested for a very longer period and leads to abdominal pain, distention heaviness of the body etc.

THINAI :

There are five thinai (The Land)

1. **Kurinchi** - Mountain
2. **Mullai** - Forest
3. **Marudham** - Agricultural land
4. **Neidhal** - The coastal area
5. **Paalai –** Desert

FEATURES OF THE FIVE REGIONS :

1. KURINCHI :

"Ì È¢ï º¢ ÅÕ¿¢Äò¾¢üÌ ¦¸¡üÈÓ ñÊ Ãò¾õ
¯È¢ï º¢ ÅÕÍÃÓ Óñ¼¡õ - «È¢»Õ¨Ãì«¨É
¨¸Â§Á ¾íÌ¾Ã¡ ¾¡¨ÁÅø¨Ä Ôí¸¾¢ìÌÁð
³Â§Á ¾íÌõ «È¢"

- À¾¡÷ò¾ Ì½ º¢ó¾¡Á½¢

Fever causing anemia, any abnormal enlargement in the abdominal organ (vaitrulaamai katti) also leads to Iyya disease.

2. MULLAI :

"Óø¨Ä ¿¢Äò¾Â§Á ãÃ¢¿¢¨Ã §ÁÅ¢ÛÁù
¦Åø¨Ä ¿¢¨Äò¾À¢ò¾ ¦ÁíÌÚí¸¡ñ - Åø¨Ä ¦ÂÉ¢ý
Å¡¾¦Á¡Æ¢ Â¡¾¾Ûû Áý Û Á¨ÅÅÆ¢§¿¡öô
§À¾¦Á¡Æ¢ Â¡¾¨ÈÂô À¢ýÒ"

- À¾¡÷ò¾ Ì½ º¢ó¾¡Á½¢

This mullai land leads to Azhal, Vallai & Vali diseases.

3. MARUDHAM :

"ÁÕ¾¿¢Äõ ¿ýÉ¡÷ Å6π¦Á¡ý¨Èì ¦¸¡ñ§¼
¦À¡Õ¾É¢Ä Á¡¾¢Â§¿¡ö §À¡ìÌõ - ¸Õ¾¿¢Äò
¾¡È¢Ã¾ï ÝÆ «ÕóÐÅ¦Ãý È¡üÀ¢½¢¦Âø
§ÄÈ¢Ã¾ï ÝúÒÅ¢ìÌ Á¢ø"

- À¾¡÷ò¾ Ì½ º¢ó¾¡Á½¢

All the Vali, Azhal and Iyyam disease will be cured in this land.

4. NEIDHAL :

"¦¿ö¾É¢ø §ÁÖô¨À ¿¡í¸¡ ÐÈ¢ÛÁÐ
¦Åö¾É¢Ä §Á¾íÌ Å¼¡Ìõ - ¦¿ö¾ø
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¸ÕíÌ¼¨Äì¸Æ¢ÈìÌí¸¡ñ"

- À¾¡÷ò¾ Ì½ º¢ó¾¡Á½¢

This place induces Vali diseases and affects liver and intestines.

5. **PAALAI :**

"À¡ ¨Ä ¿¢ÄõÀ¡ü À¼¨Ãô À¢ÈôÀ¢ì ¸
§ÁÄ¿¢Ä Á¢Â¡Ð Å¢Ã¢ò¾ü Ì - §Å¨Ä¿¢Ä
ÓôÀ¢½¢ì Ìõ @øÄõ Ó¨È§Â ÂÅüÈ¸Ä¡õ
±ôÀ¢½¢ì Ì Á¢øÄÁ· ¦¾ñ"

- À¾¡÷ò¾ Ì½ º¢ó¾¡Á½¢

This land produces all the three Vali, Azhal and Iyyam disease.

KAALAM :

Ancient Tamilians had divisions over the year into different seasons know as Perumpozhudhu and likewise in the day, it is known as Sirupozhudhu.

a. **PERUMPOZHUDHU :**

The year is divided into six seasons. They are,

1. Kaarkalam
2. Koothir
3. Munpani
4. Pin pani
5. Ilavenil
6. Mudhuvenil

b. **SIRUPOZHUDHU :**

The day has been divided into six yamams of four hours each. They are maalai (evening), Idaiyammam (Midnight), Vaikarai (Dawn), Kaalai (Morning), Nannpakal (Noon), Erpaddu (Afternoon). The each perumpozhuthu and sirupozhuthu is associated with the three humours naturaly.

FOURTEEN NATURAL REFLEXES / URGES :

The natural reflexes excretory, protective and preventive mechanisms are responsible for the urges and instincts. They are 14 in number

1. Vatham (Flatus)
2. Thummal (Sneezing)
3. Siruneer (Micturition)
4. Malam (Defecation)
5. Kottavi (Act of yawning)

6. Pasi (Sensation of hunger)

7. Neer vetkai (Sensation of thirst)

8. Erumal (Coughing)

9. Ellaipu (Fatigue)

10. Thookam (Sleep)

11. Vaanthi (Vomiting)

12. Kanneer (Tears)

13. Sukkilam (Semen)

14. Suvasam (Breathing)

These natural reflexes are said to be an indication of normal functioning of our body. A proper maintenance should be carried out and they should not be restrained with force.

THE ASTROLOGY :

MACROCOSM AND MICROCOSM :

Man is said to be microcosm, and the world is macrocosm; because what exist in the world exist in man. Man is an integral part of universal nature. The forces in the microcosm (man) are identical with the forces of the macrocosm (world). The natural forces acting in and through the various organs of the body are intimately related to the similar or corresponding forces acting in and through the organism of the world. This closely follows the Siddhars doctrine

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À¢ ñ ¼ò¾¢ Öû6π§¾ « ñ ¼õ
« ñ ¼Óõ À¢ ñ ¼Ó ¦Á¡ý §È
«È¢óÐ ¾¡ý À¡÷ì Ìõ §À¡Ð"

- ºð¼ÓÉ¢ »¡Éõ

ASTRAL INFLUENCES

All influences that come from the sun, planets and stars act on humanbodies. Moon exercises a very bad influence over the disease in general, especiallyduring the period of new moon. Examples are paralysis, brain affections, dropsy, andstimulation of sexual passions. Mars causes women's suffering from want of bloodand nervous strength. A conjugation of the moon with other planets such as Venus,mars, etc may make her influence still more injurious. The 8th place from the laghanam deals about ones age, chronic disease, death etc.

“ÝÃ½¡õ ¸¡ÄÁ¢Õò¾§Â¡Î ±ð¼¡õ
Ð¨ÈÄì¸¢É¡¾Ôõ ÜÊÊø
À¡ÃÁ¡õ ¸øÄ¡¸¢ÛÁ ©Ê§ÂÛõ
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§ºÃ§Å «ð¼Á¡¾ ¿¦ºò¾ø
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Å¢ÃÁ¡õ ¸Õí§¸¡û §¿¡ì¸§Å Ì ýÁ
Å¢Â¡¾¢Â¡ð Å¢ÂÁ¨¼ó¾¢Î Åý"
- §º¡¾¼ «Äí¸¡Ãõ

In the organisms of man, these forces may act in an abnormal manner and cause disease. Similarly in the great organism of the cosmos they may act abnormally likewise and bring about disease on earth and its atmospheric condition like earthquake, storms etc. The mars invisibly influence human’s blood constituents. The Venus makes love between two persons of the opposite sex. The following are the instances in which every sign of the Zodiac hastowards some particular parts of the body.

1. ACCORDING TO T.V.S DICTIONARY

1. Aries - To the neck
2. Taurus - Neck and shoulder
3. Gemini - Arms and hands
4. Cancer - Chest and adjacent parts.
5. Leo - The heart and stomach
6. Virgo - The intestine, base of stomach and umbilicus
7. Libra - Kidney
8. Scorpio - Genitals
9. Sagittarius - Lips
10. Capricorns - Knees
11. Aquarius - Legs
12. Pisces – Feet

2. ACCORDING TO LITERATURE THIRUVALLUVAR PERIYA SUNTHARA SEKARAM:

1. Mesam - Head
2. Risabam - Face
3. Mithunam - Neck
4. Kadagam - Shoulder
5. Simmam - Chest
6. Kanni - Side of body
7. Thulam - Posterior trunk (muthugu), stomach
8. Virutchigam - Testis
9. Thanusu - Thigh (thudai)
10. Magaram - Knee
11. Kumbam - Calcanium
12. Meenam – Foot

THE DIFFERENT PLANETS INFLUENCE THE HUMAN ORGAN:

1. ACCORDING TO LITERATURE SIDDHA MARUTHUVANGA SURUKKAM

Like the signs of the zodiac each of the planets has jurisdiction over some parts of the body. The seven planets exercise special power over some parts of the body to cause disease or diseases according to their influences on the three humors in the system:

i. SATURN :

It presides over bones, teeth, cartilages, ear, spleen, bladder and brain and gives rise to fever, leprosy, tabes, paralysis, dropsy, cancer, cough, asthma, phthisis, deafness of the right ear, hernia, etc.

ii. JUPITER :

It has jurisdiction over the blood, liver, pulmonary veins, diaphragm, muscles of the trunk and sense of touch and smell.

iii. MARS :

It has power over the bile, gall bladder, left ear, pudendum, kidneys, fever, jaundice, convulsions, hemorrhage, carbuncle, erysipelas, ulcer etc.

iv. VENUS :

It presides over the pituitous blood and semen, throat, breast, abdomen, uterus,genetalia, taste, smell, pleasurable sensation, gonorrhea, barrenness abscessesor even death from sexual or poison.

v. MERCURY :

It has jurisdiction over the animal, spirit, over legs, feet, hands, fingers, tongue, nerves and ligaments and produces fevers mania, phrenitis, epilepsy, convulsion, profuse expectoration or even death by poison, witchcraft and so on.

Planets Organ influenced

1. Solar force - Heart
2. Lunar force - Brain
3. Mars Gall - Bladder
4. Mercury - Kidney
5. Venus - Lungs
6. Jupiter - Liver
7. Saturn - Spleen

2. ACCORDING TO LITERATURE THIRUVALLUVAR PERIYA SUNTHARA SEKARAM :

1. Sooriyan - Head
2. Santhiran - Face
3. Sevvai - Chest
4. Puthan - Center of posterior trunk
5. Guru - Stomach
6. Sukkiran - Groin, Genitalia
7. Sani - Thigh (Thudai)
8. Raagu - Hands
9. Kedhu - Legs

The related Rasi and the organs, likewise the related Kiragam and organs are more prone to disease in their corresponding organ itself. Therefore, the human body is impregnated with the vital forces to be affected by the astronomical bodies in the sky. With the augmented spiritual force, a sage is able to control the above said planets. The others are activated by the force of these asteroids.

3.B.SIDDHA PATHOLOGY

KUGARANA NILAI IN SIDDHA MEDICINE

This is the first medical system to emphasis health as the perfect state of physical, psychological, social and spiritual component of human being.

The condition of the human body in which the dietary habits, daily activities and the environmental influence keep the three humors in equilibrium is considered as healthy living.

DISEASE

Disease is also known by other names viz sickness, distemper, suffering and ailment, distress of mind, chronic disease and dreadful illness.

1.THE CHARACTRISTICS FEATURE OF DISEASE

Diseases are of two kinds

i. Pertaining to the body

ii.Pertaining to the mind according to the variation of the three humors.

CAUSES OF DISEASE

Excepting the disease caused by our previous births, the disease is normally caused by our food habits and actions.

This has been rightly quoted in the following verses by Sage Thiruvalluvar,

“மிகினும் குறையினும் நோய்செய்தல் நூலோர்க்கு
அளவின்கண் நிற்கும் அது”.

The food and actions of a person should be in harmony with the nature of his body. Any increase or decrease in a humor viz. Vatham, Pitham, Kabam leads to the derangement of the three humors. The acceptance of food means the taste and quality of the food eaten and a person’s ability to digest. ‘Actions’ mean his good words, deeds or bad actions. According to Thiruvalluvar, the disease is caused due to the increase or decrease of three humors causing the upset of equilibrium.

So disease is a condition in which there is derangement in the five elements, which alters the three humors, reflected in turn in the seven physical constituents. The change could be an increase or decrease in the humors. This shows the following signs as per vitiation of the individual humor.

2.QUANTITATIVE CHANGES OF UYIR THATHUKKAL

Table-1 Changes of Uyir Thathukkal

HUMOUR	INCREASED	DECREASED
VALI (Vatham)	Wasting, blackish discoloration, affinity to hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and laziness.	Body pain, feeble voice, and diminished capability of the brain, decreased intellectual Quotient, syncope and increased kaba condition.
AZHAL (Pitham)	Yellowish discoloration of conjunctiva, skin, urine and feces, polyphagia, polydypsia, dyspepsia, burning sensation all over the body and decreased sleep.	Loss of appetite, cold, pallor and features of increased kabam.
IYYAM (Kabam)	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnea, flatulence, cough and excessive sleep.	Giddiness, dryness of the joints and prominence of bones. Profuse sweating in the hair follicles and palpitation.

3.UDAL THATHUKKAL

Table-2 Changes of Udal Thathukkal

UDAL THATHUKKAL	INCREASED FEATURES	DECREASED FEATURES
SAARAM	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnoea, flatulence, cough and excessive Sleep.	Dryness of skin, tiredness, loss of weight, lassitude and Irritability while hearing louder sounds.
SENNEER	Boils in different parts of the body, splenomegaly, tumours, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy and jaundice.	Affinity to sour and cold food, nervous, debility, dryness and Pallor.
OON	Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia.	Lethargic sense organs, pain in joints, muscle wasting in mandibular region, gluteal region, penis and thighs.
KOZHUPPU	Identical feature of increased flesh, tiredness, dyspnoea on exertion, extra musculature in gluteal region, external genitalia, chest, abdomen and thighs.	Loins pain, splenomegaly and emaciation.
ENBU	Excessive ossification and dentition	Joint pain, falling of teeth, falling and splitting of hairs and nails.
MOOLAI	Heaviness of the body and eyes, swollen Inter phalangeal joints, oliguria and non-healing ulcers.	Osteoporosis and Blurred vision.
SUKKILAM (OR) SURONITHAM	Increased sexual activity, urinary calculi	Dribbling of sukkilam / suronitham or senner during coitus, pricking pain in the testis and inflammed& contused external genitalia.

4.SUVAIGAL

Table-3 Suvaigal

Tastes	Diseases due to high intake
Inippu	Develops obesity, excessive fat, increased mucous secretion, indigestion, diabetes, cervical adenitis, increased kabam and its diseases
Pulippu	Develops nervous weakness, dull vision, giddiness, anemia, dropsy, dryness of tongue, acne, blisters etc.
Uppu	Ageing, hair loss, leprosy, dryness of tongue, debility
Kaippu	Increased dryness of tongue, defected Spermatogenesis, body weakness, dyspnoea lassitude, tremor, back and hip pain.
Kaarppu	Dryness of tongue, generalized malaise, tremor, back pain, lassitude etc.
Thuvarppu	Abdominal discomfort, chest pain, tiredness, impotency, vascular constriction, constipation, dryness of tongue etc.

5.KAALAM

Table 4.changes in elimentary condition of the external world has its corresponding changes in the human organ

KAALAM (Season)	KUTTRAM	STATE OF KUTTRAM
1. Kaarkaalam	Vatham ↑↑	Ectopic escalation
(Rainy)	Pitham ↑	In situ escalation
Aavani – Puratasi(Aug 16 – Oct 15)	Kabam (--)	Restitution
2. KoothirKaalam	Vatham (--)	Restitution
(Post rainy)	Pitham ↑↑	Ectopic escalation
Iypasi –Karthigai (Oct 16 – Dec 15)	Kabam (--)	Restitution
3. MunpaniKaalam	Vatham (--)	Restitution
(Winter)	Pitham (--)	Restitution
Markazhi – Thai (Dec 16 – Feb 15)	Kabam (--)	Restitution
4. PinpaniKaalam	Vatham (--)	Restitution
(Post winter)	Pitham (--)	Restitution
Masi – Panguni (Feb 16 –Apr 15)	Kabam ↑↑	In situ escalation
5. ElavenirKaalam	Vatham (--)	Restitution
(Summer)	Pitham (--)	Restitution
Chithirai – Vaikasi(Apr 16 – Jun 15)	Kabam ↑↑	Ectopic escalation
6. MudhuvenirKaalam	Vatham ↑	In situ escalation
(Post summer)	Kabam (--)	Restitution
Aani – Aadi (Jun 16 – Aug 15)		

6.THINAI

Table 5. Thinai, Land, Humours

THINAI	LAND	HUMOURS
1. Kurinchi	Mountain and its surroundings - Hilly terrain	Kabam
2. Mullai	Forest and its surroundings - Forest ranges	Pitham
3. Marutham	Farm land and its surroundings - Cultivable lands	All three humors are in Equilibrium
4. Neithal	Sea shore and its adjoining areas, Coastal belt	Vadham
5. Paalai	Desert and its surroundings Arid zone	All three humors are Affected

ALTERATION IN REFLEXES (14Vegangal)

There are 14 natural reflexes involved in the physiology of normal human being. If willfully restrained or suppressed, the following are resulted.

1. Vatham (Flatus)

This urge should not be suppressed. If it is suppressed it leads to chest pain, epigastric pain. Abdominal pain, ache, constipation, dysuria and indigestion predominate.

2. Thummal (Sneezing)

If restrained, it leads to headache, facial pain, low back pain and neurotic pain in the sense organs.

3. Siruneer (Urine)

If restrained, it leads to urinary retention, urethral ulcer, joint pain, pain in the penis, gas formation in abdomen.

4. Malam (Feces)

If restrained, it leads to pain in the knee joints, headache, general weakness, flatulence and other diseases may also originate.

5. Kottavi (Yawning)

If restrained, it leads to indigestion, leucorrhoea, and abdominal disorders.

6. Pasi (Hunger)

If restrained, it leads to the tiredness of all organs, emaciation, syncope, apathetic face and joint pain.

7. Neervetkai (Thirst)

If restrained, it leads to the affection of all organs and pain may supervene.

8. Kaasam (Cough)

If it is restrained, severe cough, bad breath and heart diseases will be resulted.

9. Ilaippu (Exhaustiveness)

If restrained, it will lead to fainting, urinary disorders and rigor.

10. Nithirai (Sleep)

All organs will get rest only during sleep. So it should not be avoided. Disturbance will lead to headache, pain in the eyes, deafness and slurred speech.

11. Vaanthi (Vomiting)

If restrained, it leads to itching and symptoms of increased Pitham.

12. Kanneer (Tears)

If it is restrained, it will lead to Sinusitis, headache, eye diseases and Chest pain.

13. Sukkilam (Semen)

If it is restrained, there will be joint pain, difficulty in urination, fever and chest pain.

14. Suvasam (Breathing)

If it is restrained, there will be cough, abdominal discomfort and Anorexia.

3.C.DIAGNOSTIC METHODOLOGY

The methodology of diagnosing disease in Siddha system shows uniqueness in its principle. The principle comprises of examination of Tongue, Complexion, Modulation in speech, inspection of eyes and findings by palpation. It also includes examination of Urine and Stool. The reinforcement of Diagnosis is based on Naadi (Pulse) examination. All these together constitute 'Envagaithervugal' which forms the basis of diagnostic methodology in Siddha system of Medicine.

These stools not only help in diagnosis but also to observe the prognosis of the disease and for reassuring the patient and to be informed about the nature of diseases. Besides these Envagaithervugal there are some other parameters in Siddha system which are greatly helpful in diagnosing various disease, they are Madikadainool (Wrist circummetric sign) and Soditham (Astrology).

ENVAGAI THERVUGAL (Eight fold examination)

"¿¡Ê Àரிºõ ¿¡நிÈõ ¦Á¡ழிவிழி
ÁÄõ ã òதிÃõ ÁÕòÐÅÃ¡Ô¾õ"
"¦Áö Ì றி நிÈ¦¾¡னி விழி¿¡விÕÁÄõ ¨ ¸ì Ì றி"

-§¾ ¨ÃÂ÷

The eight methods of diagnosis are Naadi (Pulse), Sparisam (Palpation), Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Feces) and Neer (Urine).

1.NAADI (Examination of pulse)

The pulse Diagnosis is a unique method in Siddha Medicine. The pulse should be examined in the right hand for male and the left hand for female. The pulse can be recorded at the radial artery. By keenly observing the pulsation, the diagnosis of disease as well as its prognosis can be assessed clearly.

Naadi is nothing but the manifestation of the vital energy that sustains the life with in our body. Naadi plays an most important role in Envagaithervu and it has be considered as foremost thing in assessing the prognosis and diagnosis of various diseases. Any variation that occurs in the three humors is reflected in the Naadi. These three humors organize, regularize and integrate basic functions of the human body. So, Naadi serves as good indicator of all ailments.

`¿¡ÊÀ¡÷ì Ì õÅ ¨ ¸

“இ Î ¦Á ý È ¿¡Ê¸ û À¡÷ì Ì õ Å ¨ ¸ ¨ Âì §¸ Ù
± ý É ¦Å ý È¡ ø ¿ Î ஸிÃø நீஸிôபி ý § É
« Î ¦Á ý È « Î ò¾ஸிÃø §Á¡திÃÁ¡ õ ஸிÃ ¨ Ä
« ôÀ§ É இÙ ò¾பி ý Ò Í ñ Î ஸிÃலி Ù òÐ
¯ Î ¦Á ý È à ñ Î ஸிÃலி Ù òÐ « ôÀ¡ ø
¯ ò¾ ¦¾¡Õ « í Ì ð¼ ஸிÃ ¨ Äநீ ஸிì ¸Ãòதிø
ÀÎ ¦Á ý È ச§Â¡தி « í Ì Ä §Á¡¾ û ளி
À¡÷¾ஸி¼ ã ý Ú¾Ãõ ÍÃõÀ¡÷ì Ì õ Å ¨ ¸ §Â
Å ¨ ¸ ± ý É Å¡¾ÁÐ´ ñ ½ ¨ÃÂ¡ õ பிò¾õ
Å ª ¨ Á¦Â¡ ý Ú « öÂ í ¸¡ ø Å ª Á¡ ö நிüகிø
À ¨ ¸ யிø ¨ Ä ¿¡Ê¸ Ùó ¦¾¡ó¾ மிø ¨ Ä
À ñ À¡ ý Í ¸¦Ã¡ºÕ åÀì ÜÚ¦ º¡ ý § É ý”

- « ¸ òதிÂ÷ ¸ É ¸ Áணி **100**

Naadi is felt by

Vali - Tip of index finger

Azhal - Tip of middle finger

Iyyam - Tip of ring finger

ã Å ¨ ¸ÔõÁ¡ òதி ¨ Ã « ª × õ

“ÅÆ í கிÂ Å¡¾õÁ¡ òதி ¨ Ã ´ ý È¡ கிø
ÅÆ í கிÂ பிò¾õ ¾ ý ணிø « ¨ ÃÅ¡ சி
« Æ í Ì õ ¸Àó¾¡ ý « ¼ í கி §Â¸¡ §Ä¡ Êø
பிÆ í கிÂ ச Å÷ì Ì ô பி º ¦ ¸¡ ý Ú மிø ¨ Ä§Â“

- §¿¡ ö¿¡¼ø Ó¾øÀ¡ ¸õ

The pulse is measured in wheat/grain expansile heights. The normal unit of pulse diagnosis is 1 for Vali (Vaadham), ½ for Azhal (Pitham) and ¼ for Iyyam (Kabam).

¿¡Ê¿ ¨ ¼

“Å¡ கிÄ ý É í § ¸¡ழி Áயி ¦ Ä É ¿¼ì Ì õ Å¡¾õ
² கிÂ Å¡ ¨ ÁÂð ¨ ¼ யி ¨ Å ¦Â É ¿¼ì Ì õ பிò¾õ
§À¡ கிÂ ¾Å ¨ ª À¡ õÒ §À¡ ÄÅ¡ õ § ºòÐÁó¾¡ ý”

- §¿¡ ö¿¡¼ø Ó¾øÀ¡ ¸õ

Compared to the gait of various animals, reptiles and birds.

Vali - Movement of Swan and peacock

Azhal - Movement of Tortoise and Leech

Iyyam - Movement of Frog and Serpent

2.SPARISAM (Examination by touch)

§¿ÂÓ¼§É Å¡¾òÐý §¾ºó¾¡Ûõ
§¿÷¨ÁÂ¡öì Ì൩óÐ ÇÄ൰¼òÐ§Ä¾¡ý
Á¡ÂÓ¼Û ð¼½ Óó ÐÊÐÊôÒ
ÁÚ×¾Ä¡õ ÒÌò¾òÐý §¾¸ó¾¡Ûõ
§¾¡Â§Å ×ð¼½ Á¾¡ÃÕì Ì ó ¦¾ÅÅ¡ö
§ºòÐÁòÐý §¾¸ÁÐ Ì൩óÐÕì Ìõ
À¡Â¦¾¡ó¾ §¾¸ÁÐ ÀÄÅ¡È¡ Ìõ
ÀñóÐ¦¾¡ð Îò §¾¸ò¨¾ô À¡÷òÐô §À§º
-¸ ñ Ï º¡ÃÀÃõÀ¨Ã¨ÅòÐÂõ

In Vali disease, some regions of the body felt chill and in some areas they are hot.

In Azhal disease, we can feel heat.

In Iyya disease, chillness can be felt.

In Thontham diseases, we can feel altered sensations.

3.NAA (Examination of tounge)

ÀÄÁ¡É ÕÇÂñÔõ ¿¡ý Üü¨Èô
À¸÷ý §Èý Å¡¾§Ã¡ÃÃý Èý ¿¡×
¸ÄÁ¡¸¦ÅÊòÐ ¸ÚòÐÕì Ì Áð§À¡ø
¸ñ Î ¦¸¡ûÅ¡ö ÒÌò¾§Ã¡ÃÃý Èý ¿¡×
¿ÄÓÈ ÇÅóÐ Àî¦ºýñÚì Ìõ ¿ðÒÌÄ¡
Ç§ÄòÐÁ§Ã¡ÃÃý Èý ¿¡×
¾ÄÁ¾ÃÖüÈÓÐ §Â¡÷¸û ¦º¡ý É
¾ý¨ÁÂÊ¾ÊòÐ ¦ÅÙòÐÕì Ìõ À¡§Ã
-¸ ñ Ï º¡ÃÀÃõÀ¨Ã¨ÅòÐÂõ

In Vali derangement, tongue will be cold, rough, furrowed and tastes pungent.

In Azhal, it will be red or yellow and bitter taste will be senced.

In Iyyam, it is pale, sticky and sweet taste will be lingering.

In depletin of Thontham, tounge will be dark with raised papillae and dryness.

4.NIRAM (Examination of complexion)

ã ý È¡ Ì õ Å¡¾பò¾ சி§ÄòÐ Áò¾¡ø
மி Ì ó¾ÓÈò ¦¾¡óதிò¾ §Ã¡கி §¾¸õ
§¾¡ ý È¡¾ ச¾Â×‰ ½ í ¸¡Ä ã ý Úó
¦¾¡ Ì ò§¾ ý Â¡ ý தி§Ã¸òதி ணிÈò ¨¾ì §¸Ù
° ý È¡¾ Å¡¾×¼ø ¸ÚòÐì ¸¡ Ï õ
° ரிÂபò¾ Ó¼ø சிÅôÒô ÀÍ ¨Á¸¡ Ï õ
§À¡ ý È¡¾ ¨ÅÂ×¼ø ¦Å ñ ¨Á §¾¡ ý Úõ
¦À¡ÕóÐó ¦¾¡ó¾ §Ã¡¸×¼ü கிÅü ¨È ¦Â¡ì Ì õ
-¸ ñ Ï º¡மிÀÃõÀ¨Ã¨ Åòதி Âõ

In Vali, Azhal and Iyyam variations, the colour of the body will be dark, yellow or red and fair respectively.

5.VIZHI (Examination of Eyes)

“ ¯ ñ ¨ÁÂ¡ö ¸ ñ Ì றôÀ¨¾ì §¸û Å¡¾õ
¯ üÈவிழி ¸ÚòÐ ¦¿¡óÐ ஈÚí ¸¡ Ï õ
¾ ñ ¨ÁயிÄ¡ô பò¾§Ã¡கியி ý È ý ¸ ñ ¸û
º¡÷À¡¸ô ÀÍ ¨Á சிÅô §ÀÚí ¸¡ Ï õ
Å ñ ¨ÁயிÄ¡ ¨ÅÂ§Ã¡கி விழி¸û ¾¡ Û õ
Å ª Á¡ É ¦Å ñ ¨Á நிÈ §Á¾¡ ¿¡¾õ
தி ñ ¨ÁயிÄ¡ò ¦¾¡ó¾§Ã¡கி யி ý È ý ¸ ñ ¸û
தீð Î Å¡ö ÀÄ நிÈ¦Á ý È ¨ ÈÂ Ä¡§Á
-¸ ñ Ï º¡மிÀÃõÀ¨Ã¨ Åòதி Âõ

In Vali disease the tears are darkened.

In Azhal disease tears are yellow.

In Iyya disease tears are whitish in colour

In Thontha disease the tears are multi coloured.

In Vali disease there will be excessive tears (epiphora).

In disturbance of all three humors, eyes will be inflamed and reddish.

6.MOZHI (Examination of voice)

À¡÷ôÀ¾¡ ý Å¡¾§Ã¡ñ ýÈý Å¡÷ò¨¾
Àì ÌÅÁ¡öî ºÁºò¾ Á¡ýÕì Ìõ
§º÷ôÀÐ¾¡ ý ñò¾§Ã¡ñýÈý Å¡÷ò¨¾
¦ºôÀì§¸¡ª ¦ÀÄòÐ§Á ÔÈòÐÕì Ìõ
²üÀÐ¾¡ý ³Â§Ã¡ñýÈý Å¡÷ò¨¾
¦Âǽ¡¸î ñÚòÐÕì ÌñÂø À¾¡Ìõ
§¸ºü¸§Å ýõ ãý Úó¦¾¡ó¾Á¡ñø
Üº¡Áü ÀÄǽ¾Á¡ö §ÀÍÅ¡§Ã
-¸ñ Ïº¡ñÀÃõÀ¨Ã¨ÅòÐÂõ

In variation of Vali, Azhal and Iyyam the voice will be medium, high and shrill / low pitched respectively. By the voice, the strength of the body can be assessed.

7.MALAM (Examination of feces)

´ìÌ§Á Å¡¾§¿¡ö ÁÄò¨¾ô À¡÷ìñø
¯¸ó¾ ÁÄõ¸Úñ§Â ¸ÚòÐÚì Ìõ
ñì¸ñò¾ §¿¡öÁÄò¨¾ ÔüÚ À¡÷ìñø
ñÌó¾ ñÅôÒ¼ý ÀÍ¨Á¾¡Ûõ §¾¡ýÚõ
¨ÁÌÅ¨ª Á¡§É§¸¨ª Â§Ã¡¸õ
ÁÄÁÐ¾¡ý ¦Å ñ¨Á¼È Á¡ýÚì Ìõ
Àì ÌÅÁ¡ýõ ãý Úó¦¾¡óÐô À¡ñø
À¸Õñý ÐÈí¸û Å¨¸ÀṛóÐ¸¡ Ïõ
-¸ñ Ïº¡ñÀÃõÀ¨Ã¨ÅòÐÂõ

In excacerbatedVali, faces is hard, dry and black in colour.

In Azhal vitiation, it is yellow.

In Iyyam disturbances it is pale.

In Thondham, it is mixture of all colours.

8.MOOTHIRAM (Examination of urine)

µ í ¢Â Å¡¾ò§¾¡÷ì Ì ñ÷¸ØÍ Ì ½ó¾¡ Ñ¨ Ãì¢ý È
â í ¦¸¡Ê ¸ÚòÐ ¦¿¡óÐ ¾ÚòÐ¼ý ¦À¡Õõ ¸ØõÀ¡ í Ì¼ý ÁòÓ¾¾§¾¡÷ì Ì õ À¾Â ñ÷ ¾ÅóÐ ¸¡ðÊ
² í ¸§Å ¸Ùì ¸¾¡¸ ±ñòÐ¼ý ¸Î òÐ ¸ØõÀ§Á ¾§ÄüÀ É ò§¾¡÷ ñ÷ì Ì ½ õ ¸¡ ª õÀì §¸ ª ¡ö
¿¡ Ù §Á ¦Å Ù òÐ ¨ ÈóÐ ¿Äõ ¦ÀÈ¸ØÍ ¸ ñ ¼¡ö
Å¡ û¸ÃíÁ¡§É ¦¾¡ó¾ §Ã¡ ¸Á¡ƒ¼÷ì Ì ó¾¡§É
¾¡ Ù ñ÷ ÀÄ¨ÈÓ¾¡ ¦ É É §Åº¡üñ§É ¡§Á
-¸ ñ Ï º¡õÀÃõÀ¨ Ã¨ Åò¨ÂõÀ

In Vali disease the urine is darkened.

In Azhal disease it is reddish in colour.

In Iyya disease it is whitish in colour.

In Thontha disease it is multi coloured.

§¾Ã÷ñ÷ Ì ñ¨, ¦¿ö Ì ñ¨

“«ÕóÐÁ¡ñÃ¾Óõ «¸§Ã¡¾Á¾¡ö
«·¸ø «Ä÷¾ø «¸¡Ä ç ý ¾¸÷ó¾Æü
Ì üÈª ÅÕó¨ ¯Èí¢ ¨Å¸¨È
¬Êì¸Äºò¾¡¸§Â ¸¡Ð ¦Àö
¦¾¡ÕÓÜ÷ò¾ì ¸¨ Äì Ì ðÀÎ ñ¨ý
¨ÈìÌ ñ¨ ¦¿ö ì Ì ñ¨ ¨ÚõÒ¾ø ¸¼§É”

- §¾¨ ÃÂ÷

Theraiyar, one of the renowned authors of Siddha medicine described urine examination and stages of health. He had explained about the colour and consistency of the urine in vitiated humor and disease (Neerkuri). He also emphasized the spreading nature of a single drop of oil on the surface of the urine indicating the imbalance of specific dosha and prognosis of disease (Neikkuri).

Neerkuri

“Åó¾ ñ÷ì ¸ñ¨ ± ¨¼ Á½ õ Ñ¨ Ã ± ï º¦ Ä ý
¨ ÈóÐ¨ÂÖ ª Å ¨ Å Â ¨ È Ì Ð Ó ¨ È§Â”

Five characters of urine has to be examined. Those are colour, consistency, odour, foam and deposits.

Colour of the urine

Normal urine is straw colored and odourless. The time of the day and food taken will have an impact on the colour of the urine.

Colour of the urine in diseased condition

Yellow colour (Similar to straw soaked water)	- Indigestion
Lemon colour	- Good digestion
Reddish yellow	- Heat in body
Colour similar to flame of forest red or flame coloured	- Excessive heat
Colour of saffron	- Extreme heat

Neikkuri

« Ã ¦ Å É ñ Ê É · § ¸ Å ¡ ¾ õ
¬ ழி § À ¡ ø ÀÃவி ý « . · § ¾ ப ò ¾ õ
Ó ò ¦ ¾ ¡ òÐ நüகி ý ¦ Á ¡ ழி Å ¾ ý ¸ À § Á
-§ ¾ Ã ý ந÷ Ì ற ¦ ¿ ö Ì ற

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases.

Aravu (Snake Pattern of spread) indicates Vali disease,

Aazhi (Ring Pattern of spread) indicates Azhal disease.

Muthu (Pearl Pattern of spread) indicates Iyya disease.

In Neikkuri, the rapid spread of oil drop; Pearl beaded and Sieve type of spreading pattern indicates incurable state of the disease. From this, we can assess the prognosis by the Neikkuri.

Indications of spreading pattern of oil

Lengthening	- Vali
Splits	- Azhal
Sieve	- Iyyam
Stands as a drop	- Poor prognosis
Slowly spreads	- Good prognosis
Drop immerses into Urine	- Incurable disease

MANIKKADAI NOOL(Wrist circumetric sign)

According to the PathinenSiddharNaadinool, Manikadainool is also helpful in diagnosis. This manikkadainool is a parameter to diagnose the disease by measuring the circumference of the wrist by means of a thread and then expressing it in terms of patient's finger breadths. By this measurement the disease can be diagnosed.

Manikadai nool inference

(Ref: Agathiyarsoodamanikayarusoothiram)

When the Manikkadainool is 11 fbs, the person will be stout and he will live a healthy life for many years. When the Manikkadainool measures between 4 & 6, it indicates poor prognosis of disease and the severity of the illness will be high and it leads to death.

Measurement	**Possible conditions**
10 fbs	Pricking pain in chest and limbs, gastritis and ulcer result.
9 ¾ fbs	Fissure, dryness and cough will be resulted.
9 ½ fbs	Odema, increased body heat, burning sensation of eye, fever, Mega noi& Anorexia.
9 ¼ fbs	Dysuria, Insomnia, Sinusitis and Burning sensation of Eye.
9 fbs	Impaired hearing, pain around waist, thigh pain, unable to walk.
8 ¾ fbs	Increased body heat, skin disease due to toxins, abdominal discomfort, cataract, sinusitis.
8 ½ fbs	Leucorrhoea, venereal disorder and Infertility will occur.
8 ¼ fbs	Stout and painful body. Headache, Sinusitis and toxins induced Cough.
8 fbs	Abdominal discomfort, gastritis, anorexia & venereal diseases.
7 ¾ fbs	Piles, burning sensation of limbs, headache, numbness occur. Within 2 years cervical adenitis and epistaxis results.
7 ½ fbs	Osteoporosis, abdominal discomfort, burning sensation of eyes, increased body temperature. Within 6 days all the joints of the limbs presents a swelling.
7 ¼ fbs	Lumbar pain, increased pitha in head, anemia, eye pain, odema and somnolence
7 fbs	Pitham ascends to head, haemetemesis, phlegm, burning sensation of limbs and constipation.

6 ¾ fbs	Eye ache, dizziness, testis disorder. Within 3 years it causes anuria, pain and burning sensation over limbs, facial sweating results.
6 ½ fbs	Thirst, anorexia, increased body heat and vatham results.
6 ¼ fbs	Diarrhea, belching, vomiting and mucous dysentery
6 fbs	Reduced weight, phlegm in chest. It results in death within 20 days.
5 ¾ fbs	Delirium, dizziness, loss of consciousness. It results in death even if the patient takes gruel diet
5 ½ fbs	Severity of illness is increased. Toxins spread to the head. Tooth darkens. Patient will die in 10 days.
5 ¼ fbs	Patient seems to be sleepy and death results on the next day.
5 fbs	Pallor and dryness of the body. Kabam engorges the throat and the person will die.
4 ¾ fbs	Dryness of tongue and tremor present. Patient will die in 7 days.
4 ½ fbs	Shrunken eyes, odema will present and death results in 9 days.
4 ¼ fbs	Tremor, weakness of limbs and darkening of face occurs.

4. READING BETWEEN THE LINES OF SAGE YUGI ABOUT MIRUTTHU VAATHAM

“ÁÕÅÄ¡õ ÓÊÂ¡Å¡ö ¾É¢¦Ä¡ Ðí¸¢
Á ñ ÊÂ §Á§É¡ì¸¢Â À¡É Å¡Â¢ø
±ÕÅÄ¡ §ÂÈ¢Å Â¡øÑ¨Ãô ÀðÊ
ÊÚ¸¢§Â §¾¸¦ÁøÄ¡õ ÅÄ¢ì Ì í ¸ñ¼¡ö
ÐÕÅÄ¡ö ÁÄó¾ûÙ ï §º¡¨À Â¡Ìõ
ÍÚì¦¸ýÚ ¸¡ø¨¸Ô ï §º¡÷óÐ §À¡Ìõ
ÀÕÅÄ¡ö ÁÉÐ¾¡ý ÀÂÓ Óñ¼¡ö
À¡ÃÁ¢ÕòÐ Å¡¾ò¾¢ý Àñ Ò ¾¡§É”.

- ä¸¢ ¨Åò¾¢Â º¢ó¾¡Á½¢

According to text Yugivaithya cinthamani, ***Mirutthu vaatham*** is a type of vaatha disease characterized by abdominal discomfort, constipation, diarrhoea, fatigue, dropsy, wearinees of limbs and fear.

Table 7. BREAKUP SYMPTOMATOLOGY

S.NO	LINES FROM POEM	**BREAKUP SYMPTOMATOLOGY**
1.	"Á ñ ÊÂ §Á§É¡ì¸¢Â À¡É Å¡öÅ¢ø "	Moving upwards said of pain. It emanates from the region of the pelvic plexus and extends over the genitals, abdomen, pelvic region , etc.
2.	"±ÕÅÄ¡§ÂÈ¢ÅÂ¡ø Ñ¨ÃôÀðÊÚ¸¢§Â"	Becoming hard , As in constipation
3.	"§¾¸¦ÁøÄ¡õ ÅÄ¢ì Ì í ñ¼¡ö"	Pain all over the body.
4.	"ÐÕÅÄ¡ö ÁÄó¾û Ùõ"	Alvine discharge.
5.	"§º¡¨ÀÂ¡ Ìõ "	Dropsy with anaemia
6.	"ÍÚì¦¸ýÚ ¸¡ø¨¸Ô ï §º¡÷óÐ §À¡ Ìõ"	Exhaustion of limbs and fatigue
7.	"ÀÕÅÄ¡ö ÁÉÐ¾¡ý ÀÂÓ Ó ñ¼¡ö "	Fear

Table 8. LIGHT FROM LEXICONS

S. No	Yugi Text Lexicon T.V.S.Reference	T.V. Sambasivampillai Dictionary Meaning in Tamil	T. V.Sambasivam Pillai, Dictionary meaning in English	Lexicon T.V.S.Reference
1.	Á ñ ÊÂ §Á§É¡ì¸¢	§Á¦ÄØõÀø	Moving upwards said of pain.	Pg no 919 VOL V
2.	«À¡É Å¡öÅ¢ø	@Ð ÁÄì Ì¼¨Ä§Â @¼Á¡¸ì ¦¸¡ñ Î ¯îº ó¾¨ÄÂ¢ø ¿¢ýÚ , @Îôà¢ý âðÎ, Á÷Á ¾¡Éõ, «ÊÅÂ¢Ú, «Êò¦¾¡¨¼ ¬¸¢Â @ùÅ¢¼í¸6π¢ø ÀÃÅ¢,Å¢óÐ, ¿¡¾õ,ÁÄõ, ãò¾¢Ãõ, ¸ÕôÀõ ¬¸¢Â @¨Å¸¨6π ¦Å6π¢ôÀÎòÐõ.	It emanates from the region of the pelvic plexus and extends over the genitals, abdomen, pelvic region , etc.	Pg no 308 VOL I
3.	±ÕÅÄ¡§ÂÈ¢ÅÂ¡ø Ñ¨ÃôÀðÊÚ¸¢§Â	¦¸ðÊôÀÎ¾ø	Becoming hard , As in constipation	Pg no 982 VOL I
4.	§¾¸¦ÁøÄ¡õ ÅÄ¢ì Ì í¸ñ¼¡ö	¯¼õÀ¢ü Ì ²üÀÎõ ÅÄ¢	Bodily pain	Pg no 1015 VOL V
5.	ÐÕÅÄ¡ö ÁÄó¾û Ùõ	ÁÄõ ¸Æ¢ò¾ø	Alvine discharge	Pg no 734 VOL V
6.	§º¡¨ÀÂ¡ Ìõ	@Ãò¾õ Ì¨È Å¢É¡ø ÀÄõ Ì¨ÈóÐ ¯¼õÒ ¦ÅÙòÐ Å¦í Ìõ µ÷ ¿¢¨Ä¨Á	Dropsy with anaemia.	Pg no 688 VOL IV
7.	ÍÚì¦¸ýÚ ¸¡ø¨¸Ô ï §º¡÷óÐ §À¡Ìõ	ÀÄÅ¢Éò¾¡ø ¸¡ø ¨¸ §º¡÷Å¨¼¾ø	Exhaustion of limbs through bodily weakness	Pg no 1411 VOL II
8.	ÀÕÅÄ¡ö ÁÉÐ¾¡ý ÀÂÓ ñ¼¡ö	«îºõ	Fear	Pg no 152 VOL V

ANALOGY BETWEEN THE LINES OF YUGI VAITHYA CINTHAMANI AND MODERN TEXT

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"Á ñ ÊÂ §Á§É¡ì ¸ÂÀ¡É Å¡öÅø"
QUOTINGS FROM MODERN TEXT ABOUT IBS
"According to Rome II criteria, abdominal pain or discomfort is a prerequisite clinical feature of IBS" (Harrisons principle of internal medicine.Pg No;1789, 16th Edition). The most common presentation is that of recurrent abdominal discomfort. (Davidson's principle &practice of medicine.Pg no.907,22 Edition)

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM) "±ÕÅÄ¡§ÂÈ¢ ÅÂ¡ø Ñ¨ÃôÀðÊÚ¸¢§Â"
QUOTINGS FROM MODERN TEXT ABOUT IBS “Constipation may refer to a decreased frequency of stools, passage of hard stools or lumps excessive straining or an inability to empty the rectum adequately’’. *(CecilText book of medicine,P.No:807 22nd Edition)* Most patients alternate between episodes of constipation and diarrhoea,but it is useful to classify patients as having predominantly constipation or predominantly diarrhoea. *(Davidson's principle &practice of medicine.Pg no.907,22 Edition)*

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"§¾¸¦ÁøÄ¡õ ÅÄ¢ì Ì í ¸ ñ¼¡ö"
QUOTINGS FROM MODERN TEXT ABOUT IBS “The pain commonly occurs in the lower abdomen but may occur at any location and tends to be variable in quality, and severity and duration’’ (*CecilText book of medicine,P.No:807, 22nd Edition)*

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"ÐÕÅÄ¡ö ÁÄó¾û Ùõ"
QUOTINGS FROM MODERN TEXT ABOUT IBS “To a patient diarrhea may mean loose or watery stools, an increased stool frequency passage of mucus, urgency, or even fecal incontinence’’. *(CecilText book of medicine,P.No:807 22nd Edition)* Most patients alternate between episodes of constipation and diarrhoea,but it is useful to classify patients as having predominantly constipation or predominantly diarrhoea. *(Davidson's principle &practice of medicine.Pg no.907,22 Edition)*

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"§º¡¨ÀÂ¡Ìõ "
QUOTINGS FROM MODERN TEXT ABOUT IBS
“Manifested as chilly sensation of whole body,pale complexion and pain of the loin,knees or lower abdomen,morning diarrhoea,general dropsy,dysuria or polyuria, pale and tender of tongue,weak pulse’’.(*Wiley online library, Alimentary pharmacology and therapeutics.Volume 20, Issue10,P.No;1205-1210 Publication 2004)*

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"Í Ú ì ¦ ¸ ý Ú ¸ ¡ ø ¨ ¸ Ô ï § º ¡ ÷ ó Ð § À ¡ Ì õ"
QUOTINGS FROM MODERN TEXT ABOUT IBS “Many have other functional symptoms including dyspepsia, urinary frequency ,headache backache, dyspareunia,poor sleep and chronic fatigue syndrome’’. *(Davidson Principle and practice of medicine, P.No:818, 19th edition)*

YUGI VAITHYA CINTHAMANI PHRASES(MIRUTTHU VAATHAM)
"À Õ Å Ä ¡ ö Á É Ð ¾ ¡ ý À Â Ó Ó ñ ¼ ¡ ö "
“Fear of serious disease or coexistent psychiatric disease frequently precipitates’’(*CecilText book of medicine,P.No:809 22nd Edition)*

5.INTRODUCTION TO VAATHAM

According to T.V Sambasivampillai, the Vali is defined as the three humors (life forces), occupying the region below navel. It is responsible for all movements in the body. It spreads throughout the body and cause respiration, hunger, thirst etc. It is the energy or power that prevails all over the keeping various tissues in good condition. Vali is soft, fine and temperature (coolness) which could be felt by touch. It is the base for the genesis of other two humors.

THE SITES OF VALI

"¦¿6ñ¢ó¾¢ð¼ Å¡¾ÁÀ¡ Éò¨¾ô ÀüÈ¢
¿¢¨Èó¾¢¨¼¨Âî §º÷óÐó¾¢ì ¸¡§Æ ¿¢ýÚ
Ì6ñ¢ó¾¢ð¼ ãÄÁà ¦¼ØóÐ ¸¡Áì
§¸¡ÊÂ¢¨¼¨Âô ÀüÈ¢¦ÂØí Ì½ò¨¾ô À¡§Ã".

"Ì½Á¡É ¦ÅÖõ¨À§Áü ¦È¡ì¨¸ º¡Ê
¿¢¨ÈÅ¡¸¢ Á¡í¸¢º ¦ÁøÄ¡õ ÀÃóÐ
¸¡ø¸¡ðÊ Å¡¾¦Áí Ì í ¸Äì Ìó ¾¡§É".

-¨Åò¾¢Â º¾¸õ

According to Vaidyasathakam, Vali dwells in the following places: Umbilicus, rectum (abaanan), abdomen, anus, bones, hip-joint, skin, navel plexes, joints, hair follicles and muscles.

«È¢ó¾¢Îõ Å¡¾ Á¼í Ì ÁÄò¾¢É¢ø
-¾¢Õãð÷
"¿¡¦ÁýÈ Å¡¾òÐ ¸¢ÕôÀ¼§Á §¸6ñ¡ö
¿¡À¢ì Ì ì ¸¡¦ÆýÚ ¿Å¢Ä Å¡Ìõ".

According to Sage Tirumoolar and Yugimuni, the places of Vali are anal region and the region below the navel.

"«È¢ó¾¢Îõ ±øÄ¡õ ´ýÈ¡ö ¬Å¢ì Ìõ «¾¢÷Å¡Éó¾
¦ºÈ¢ó¾¢Îõ Åý É¢¾¡Ûõ ãÊÎõ ¸ñ½¢§Ä ¾¡ý
ÀÈ¢ó¾¢Îõ Å¡ö× ¾¡Ûõ ÀÃº¢ì Ìõ ±í Ìõ À¡§Ã".

-«¸ò¾¢Â÷ ¨Åò¾¢Â ¸¡Å¢Âõ

According to Vaithiya Kaviyam, the Vali exists all over the body.

"«À¡ÉÓ¾ Öó¾Å¨Ã Å¡¾¿¨Ä
¯ó¾Â¢ý §ÁØ Á¡÷Ò ÁðÎõ À¢ò¾¿¨Ä".
-«Û§À¡¸ ¨Åò¾Â À¢ÃÁ Ã¸º¢Âõ

According to Anupoga VaithiyaBramaRagasiyam, the Vali exists between the Umbilicus and navel region.

CHARACTERS OF VALI

Table-1 Characters Of Vali

S.NO	OWN CHARACTER	OPPOSITE CHARACTER
1.	Rough(Kadinam)	Miruthu(Soft)
2.	Varatchi(Dry)	Pasumai(Unctious
3.	Elasu(Light)	Baluvu(Heavy)
4.	Kulirchi(Cold)	Akini(Hot)
5.	Asidha(Unstable)	Sthiram(Stable)
6.	Anuthuvam(Subtle)	Katti(Solid)

Properties of Vali

"´ØíÌ¼§É ¾¡§¾ú ãî§º¡í¸¢ ¾Âí¸
±ØîÍ¦ÀÈ ±ôÀ½ÔÁ¡üÈ - ±Øó¾Ã¢Â
§Å¸õÒÄý¸Ùìì §ÁÅî ÍÚÍÚôÒ
Å¡ì¸Ä⅁⅁ìì õ Á¡ó¾÷ìì Å¡Ô".
-ÁÕòÐÅ ¾É¢ôÀ¡¼ø

- ü The following are the inherent properties of Vali.
- ü To stimulate.
- ü To respire.
- ü To activate the Body, mind and the intellect.
- ü To operate the fourteen different kinds of natural reflexes/ urges.
- ü To activate the seven physical constituents in functional co-ordination.
- ü To strengthen the five sense organs.
- ü In the above processes Vatham plays a vital role to assist the body functions.

Functions of deranged Vatham (Vali) (Abnormal functions of Vatham)

- Body pain
- Pricking pain
- Pain as though the body is tightly bounded by cords
- Nervous debility
- Tremor
- Rigidity
- Dryness
- Remorseless
- Debility (Emaciation)
- Throbbing pain (Restrictions of movements)
- Trauma
- Dislocation of joint
- Weakness of functional organs and loss of functions
- Loss of taste sensation or preparation of Astringent taste only
- Constipation
- concentrated urine
- Thirst
- Sensation of fragility in the foreleg and thigh
- Numbness and pricking pain in the bones
- Goose skin
- Stiffness of upper and lower limbs and black
- The skin, eyes, faeces and the urine are dark in colour.

CAUSES FOR VATHA DISEASES :

"±ýÉ§Å Å¡¾ó¾¡ ¦É ñÀ ¾¡Ìõ
Á¢Ìò¾¢§Ä ÁÉ¢¾÷Ùì ¦¸öÐ Á¡Ú
À¢ýÉ§Å ¦À¡ó¾¨É§Â §º¡Ãï ¦ºöÐ
¦ÀÃ¢§Â¡÷¸û À¢Ã¡Á½¨Ãò à Œ ½¢òÐõ
Åý É§ÅÅî ¦º¡ò¾üº §º¡Ãï ¦ºöÐ
Á¡¾¡À¢¾¡ ÌÕ¨Å ÁÈóÐ §À÷ìÌõ
¸ýÉ§Å §Å¾ò¨¾ ¿¢ó¨¾¦ºö¾ §À÷ìÌí
¸¡Âò¾¢ü ¸Äó¾¢Î§Á Å¡¾ó ¾¡§É".
"¾¡¦ÉýÈ ¸ºô§À¡Î ÐÅ÷ôÒ ¨ÃôÒ
º¡¾Á¡ö Á¢ï Í¸¢Û ï º¨Áò¾ Åý Éõ
¬¦ÉýÈ Å¡È¢ÉÐ ¦À¡º¢ò¾ Ä¡Öõ
¬¸¡ò §¾ÈÄÐ ÌÊò¾ Ä¡Öõ".

À¡¦ÉýÈÀ¸ÖÈì¸ Á¢Ã¡Å¢ Æ¢ôÒ
ÀðÊÉ¢¦Â Á¢¸×Ú¾ø À¡Ã ¦Áö¾ø
§¾¦ÉýÈ ¦Á¡Æ¢Â¡ü §Áü º¢ó¨¾ Â¡¸¢ø
º¦ì¸ÃÁ¡ö Å¡¾ÁÐ ¦ºÉ¢ì Ìó ¾¡§É"
¬½¡É ÅÃýÈ¦É6π¦Â Á¾¢Â¡ Á¡ó¾÷
«¸¾¢ÀÃ §¾º¢Â÷¸ð ¸ýÉ Á¡Â¡÷
§¸¡É¡É ÌÃ¦Á¡Æ¢¨Â ÁÈó¾ §À÷¸û
¦¸¡¨Ä¸¦6π¡× ¦À¡ö¸¡Áí ÌÈ¢ò¾ §À÷ìÌ
° É¡É º¼ó¾ýÉ¢ø Å¡¾õ ÅóÐ
¯üÀÅ¢ì Ìõ §Å¾ò¾¢ø Öñ¨Á ¾¡§É
-ä¸¢ ¨Åò¾¢Â º¢ó¾¡Á½¢

According to Yugi Vaithya Chinthamani, those who are squandering money, insulting elders, abandoning or forgetting the parents, blaspheming the Holy books, not respecting the divine gifts, having wickedness in their mind and those with day slumber and staying back at night will attract Vali diseases. Increased intake of bitter taste, astringent, hot taste, increased intake of water, excessive starvation, sexual indulgence will produce Vali diseases.

¦¾¡Æ¢ø ¦À¡Ú¨¸ôÒì¸¡÷ò òøÐÅ÷ò¾ø Å¢ï Í¸¢Û ï §º¡Úõ
À¨ÆÂ¾¡õ ÅÃÌ Áü¨Èô ¨Àó¾¨É ÂÕó¾¢ É¡Öõ
±Æ¢ø¦ÀÈô À¸Ö Èí¸¢ @ÃÅ¢É¢ ÖÈí¸¡ ¾¡Öõ
Á¨Æ¿¢¸÷ ÌÆÄ¢ É¡§ÅÅ¡¾í§¸¡ À¢ìÌí ¸¡§½
¸¡½¦Å Á¢¸×ñ ¼¡Öí ¸ÕÐÀð ÊÉ¢Å¢ð¼¡
Á¡É¨É Â¡÷¸ñ §Á¡¸ ÁÈì¸¢Û Á¢Ìó¾¢ð¼¡Öõ
¬½Å ÁÄí¸¼õ¨Á Âí¹§É Å¢¼¡¾ ¾¡Öõ
Å¡Û¾ý Á¼¿ø Ä¡§ÅÅ¡¾í§¸¡ À¢ìÌí ¸¡§½.
À¡Ã¢Éü ÀÂôÀð¼¡Öõ ÀÄÕ¼ý §¸¡À¢ò ¾¡Öõ
¸¡¦ÃÉì ¸Õ¾¢ §Â¡Êì ¸ØÁÃò ÐÃò¾¢ ½¡Öõ
²÷¦ÀÚ ¾ÉÐ ¦¿ï º¢ý Á¢¸òÐì¸ Á¨¼ó¾¡Öõ
À¡Ã¢Â¸¡üÈ¢ É¡Ùõ À¼Ã¢Ûõ Å¡¾í ¸¡ Ïõ
¸¡Äí¸ñ Á¡È¢ Ôñ Ïõ ¸¡Ã¢Âò ¾¡Öó ¾ñ½¢÷
º¡Ä¦Å ÂÕó¾¢ ½¡Öí ºó¾¢Â¢ Öð¸¡÷ó ¾¡Öõ

§¸¡ÄÁ¡õÒÅ¢ôÒ ¦¿ö¨Á Ì¨ÈÅÈ ÅÕó¾¢ É¡Öõ
Å¡ÄÅ¡÷ Ó¨Ä¿ø ¿¡û§ÅÅ¡¾Óü ÀÅ¢ìÌí ¸¡§½
¯üÀÅ¢ò ¦¾ØÁô §À¡§¾ ÔÂ÷ÒÈòÐÊ¨ÂôÀüÈ¢ò
¦¾üÀÈì Ì¨¼óÐ §¿¡×ï ¦ºöÐ§ÁÄ §¿¡¸Ì Á¡¸¢ø
Å¢ü¦À¡Ä¢ Ñ¾Ä¢ É¡§Å §ÁÄ¢Îí Ì½í¸ ¼õÁ¢ø
¦º¡ü¦ÀÚ Å¡¾õ Åñ½ï ¦ºöÂ¸¡ ÄÊ¨ÂôÀüÈ¢
¦¾Ã¢óÐÓý ¦º¡ýÉ Åñ½ï ¦ºöÂ¸¡ ÄÊ¨Âô ÀüÈ¢
Á¡ó¾¨Éô §À¡üÈ¢ Á¢÷òÐÁüÚ§Áø §¿¡ìÌ Á¡¸¢ø
«Ãý È¨Éò Ð¾¢Â¡ Á¡ó¾ ÃÛºÃ¢ì ¸¢ýÈ §¸¡Â¢ø
ºÃ¢ó¾¢Îí ÌÆÄ¡ö Å¡¾í ÌÊÒÌí º¡üÚí ¸¡§Ä
-ÀÃÃ¡º§º¸Ãõ.

Parasasekaram also states the same that is also stated in YugiVaithya Chinthamani like increased intake of varagu, thinai, ghee and kaippu taste, increased intake of food, increased fear , excessive anger, deep sadness, increased exposure o forcible flow of air, altered dietary timings etc.

"¸¡É¨¼Â¡Äî ºò¾¡ü ¸ÎõÀº¢ Â¡÷§¸¡ Àò¾¡ø
° ýÁ¢ Ä¢ÃÅ¢ø Å¡÷ò¨¾ ÔÃõ¦ÀÈ Å¢¨Ãì¸ Ä¡æ ñ
¬ýÀ¢ýÓÉ¢Å¡ø Á¡Õ ¾Îò¾Îò Ð¨Ãì Ì ï ¦º¡øÄ¡ø
®ýÁ¢ Ä¢¸úîº¢ Â¡É Å¢ìøÅ¡¾ §¸¡Àí ¸¡ Ï õ"

-« í ¸¡¾¢À¡¾õ

According to Angaathipatham, increased starvation and increased anger will produce vali disease.

"¦ÅöÂ¢ø ¿¼ì¨¸ Â¡Öõ Á¢¸ó ¾ñ½¢÷ ÌÊì¨¸ Â¡Öõ
¦ºöÂ¢¨Æ Á¸ø¢ É¡¨øîº÷ó¾Û ÀÅ¢ì¨¸ Â¡Öõ
¨¾Â§Å Å¡¾ §Ã¡¸ï ºÉ¢ì Ìõ¦ÁÉÈÈ¢óÐ ¦¸¡û§ø"

-§¾¨ÃÂ÷ Å¡¸¼õ

According to TheraiyarVagadam, walking under hot sun, increased sexual desire, increased intake of food and bitter gourds will produce Vali disease.

Å¡¾§¿¡ì¸¡É ©ÂøÒ: (Characteristic features of Vatha)

"Å¡¾§Á ¸¾¢ò¾ §À¡Ð Å¡Ô×¦ÁØõÒí ¸ñË÷
Å¡¾§Á ¸¾¢ò¾ §À¡Ð Å¡ÔÅó¾Îï ºý É¢ §¾¡ø¾õ
Å¡¾§Á ¸¾¢ò¾ §À¡Ð ÅøÄîý ¦ÁÄ¢óÐ ¦¸¡øÖõ"

-«¸ò¾¢Â÷ º¢¸¢îº¡ ÃòÉ¾¢Àõ

According to AgasthiyarSikichaRathnaDeepam derangement in Vali will produce delirium and emaciation.

"Å¡¾Å¢Ú «ýÉÁ¢Èí¸¡Ð ¸ÎôÒñ¼¡õ Åñ½Óñ¼¡õ
§Á¡Ð¸ðÌ §Ã¡¸õ ÍÃÓñ¼¡ Á¢ÕÁÖÁ¡ ÓÈí¸¡¦¾ýÚõ
µ¾Ã¢Â Å¡¾ÁÉÄ¡Ì ¿Îì¸Óñ¼¡õ ¦À¡ÕûÂ÷ó¾
¾¦¾É§Å ¿ÃõÀ¢òÐ ºóÐ¸û §¾¡Úí¸¼ì Ìó ¾ÉÓó¾¡§É"

-§¾¨ÃÂ÷ Å¡¸¼õ

According to TheraiyarVagadam, deranged vali produce loss of appetite, fever, cough, insomnia, shivering of the body, nervine disorders, and pain in all the joints.

Å¡¾í ÜÚ Å¢Õò¾õ:

“¦ºi øÄi §Å Å¡¾ÁÐ Á¢È¢üÈi Éi ø
§ºi÷Å¨¼óÐ Åi öÅ¢Éi ø §¾¾¸ ¦Áí Ìõ
¦ÁøÄ§Å ¨¸¸i ø º¾¢Ô ñ¼i Ìõ
¦ÁöÁ¼í Ìõ ¿¢Á¢Ã¦Åi ñ½¡¾¢Á¢Õ ñ¼i Ìõ
¦ÅøÄ§Å ¦Ài ÕÓõÅÂ¢Ú¨ƒì Ìõ
Å¢ÕõÂý É ï ¦ºøÄi ÐÅ¢óÐ ¿‰¼õ
¦¸i øÄ§Å ¿iôÒƒ¢ì Ìõ ¸Æ¢îºÖ ñ¼iõ
ÜÈ¢Éi÷ Á¨ÄÂÓÉ¢ ÜÈ¢Éi §Ã
Å¡¾Á¢Éi ø Å¡Ô Å¢Éi ø §¾¸ ¦ÁøÄi í
Ìò Ð í ¸i ø¨¸ ºóÐ ¦Ài ÕòÐì¸û ¯¨ƒÔõ
¸i ø¨¸ ¦Âi Õ Àì¸ò¾¢ø Ó¼í Ìõ ÌÉ¢ó¾i ø
¿¢Á¢Ã¦Åi ð¼i Ð ¾¢Á¢Õ ñ¼i Ìõ ¯¼ø ¦Ài ÕÓõ
Ì¼øÒÃðÎõ «ýÉ íÍÕì Ìõ,ÅÂ¢Ú Áó¾ì Ìõ
¦Ài ÕÓõ,ÁÄºÄ í¸ðÎõ «Ài É ï ÍÕí Ìõ
¿i× Ò¢ì Ìó ¾i Ð ¿ð¼Ái Ì í ¸Æ¢îºÖ ñ¼i Ìõ”.

According to Vatha KooruVirutham, deranged Vali produces fatigue, lethargy, loss of appetite, abdominal discomfort, diarrhea, constipation, cough, insomnia and joint pain.

§Ãi¸¢¸ƒý §¾¸Ó¾Äi É Ì È¢¸û :

"« ¨Èó§¾i õ Åi¾§Ãi¸¢Ô¼ø «Ä÷¸ ñÓ¸ÓõÀøÁÄÓõ
¿¢¨Èó¾ Å¢Æ¢Âø ¿¦÷ÅÊÔõ ¿¦ñ¼ ¿¡Ô ¸Úò¾¼
¾¢¨Èó¾ Óûƒi ö ¾¡É¢Õì Ìõ º¢Õ¿¦÷ ¦Ài ÕÁ¢¸ÚòÐÅÕ
Ó¨Èó¾ ¿¦Õí ¸Ú¸ÚòÐÓ¨ÃÂi ö §Ãi¸ Ó ñ¼i §Á"

Physical nature of vatha constitution is dark coloured fece, eye, teeth,and stool.

§¿¡ö ÅÕõ ÅÆ¢:(AETIOLOGY)

¸¡Ä ¾ÂøÒ:(Environmental Factors)

Å¡¾Å÷ò ¾É ¸¡ø§Á§¾¡ ¦ÅýÉ¢ø
ÁÕ×¸¢ýÈ ¬É¢ ¸ü¸¼ Á¡¾õ
¬¾¨ Éô À°¢§Â¡Î ¸¡÷ò¾¢¨¸ ¾ýÉ¢ø
¬¼Õ§Á ÁüÈ Á¡¾í¸û ¾ýÉ¢ø
§À¡¸§Å °¢Á¢ì¸¢ýÈ ¸¡ÄÁ¡Ìõ

-ä¸¢ °¢ó¾¡Á¡½¢

Vali disease will be precipitated in the months from Aani to Karthigai(June to December)

ÀÐÁò¨¾ô âì¸ ¨ÅìÌõ À¡ÛÁ¢¸ì ¸¡Ôõ
ÓÐ§ÅÉ¢ Ä¢üÒÅ¢ü¿÷ ÓüÚõ - ¸Ð¦ÁÉ
ÅüÚõ ¸ÀÁ¢ ÌõÅ¡ÔÁ¢Ìõ Å¡úÁ¡ó¾ì
ÌüÈ ¿Ä¢ì §¸¾¦¾ý §È¡Ð.

-°¢ò¾ ÁÕòÐÅ¡í¸ ÍÕì¸õ

In Mudhuvenilkaalam(Late summer), the increased solar radiation increases the evaporation of water content in the world, at the same time these similar actions on the body produces increased production of mucus for digestion and develop the derangement of vali disease.

¯½×Å¨¸¸û

Å6π¢ ¾Õ ¸¡ö¸¢Æí Ì Å¨ÃÅ¢Ä¡ ¾Á¢Äø §¸¡¨Æ
Ò6π¢ ¾Â¢÷ §À¡ýÁ¢Ì ì Ì Ó¨ÈÂ¢Ä¡ ×ñÊ §¸¡¼ø
Ì6π¢÷¾Õ Å6π¢Â¢ü §È¸íÌÉ¢ôÒÈ ×ÄÅø ¦Ànñ Ê÷
Ì6π¢¾Õ ÓÂì¸õ ¦Àü§È¡÷ ¸Ê¦°Âø ¸ÕÅ¢Â¡Áø.

-°À¡À¾¢ ¨¸§ÂÎ

According to Sababathikaiyedu, increased intake of tubers, increased exposure to wind, living in higher altitudes, increased sexual desire, and increased exposure to chill weather will Vali disease.

"¦¾¡Æ¢ø ¦ÀÚ ¨¸ôÒì¸¡÷ò¾ø ÐÅ÷ò¾ø Å¢ï Í¸¢Û ï §º¡Úõ
À¨ÆÂ¾¡õ ÅÃÌ Áü¨Èô ¨Àó¾¢¨ ÉÂÕó¾¢É¡Öõ
±Æ¢ø ¦ÀÈôÀ¸ÖÈí¸¢ @ÃÅ¢É¢Öí¸¡¾¡Öõ
Á¨Æ ¿¢¸¡ ÌÆÄ¢É¡§Ä Å¡¾í§¸¡ À¢ì Ìí¸¡§½."

-ÀÃÃ¡º §º¸Ãõ

According to Pararaasasekaram, increased intake of bitter taste, astringents, sour tastes, increased intake of old cooked rice, day slumber and staying back at night will increase Vali.

ÀÆì¸ ÅÆì¸í¸û (Habits)

¦ÅöÂ¢Ä¢ø ¿¨¼ì¨¸Â¡Öõ Á¢¸ò¾ ñ½÷ ÌÊì¨¸Â¡Öõ
¦ºöÂ¢¨Æ Á¸ñ¢É¨Ãî §º÷ó¾ÛÀ Å¢ì¨¸Â¡Öõ
¨ÀÂ§É ¯ ñ¨ÁÂ¡Öõ À¡¸ü¸¡ö ¾ý¨¸Â¡Öõ
¨¾Â§Ä Å¡¾§Ã¡¸õ ºÉ¢ì Ì¦ÁýÈÈ¢óÐ ¦¸¡û§ñ

-§¾¨ÃÂ÷ Å¡¸¼õ

Excessive walking in hot sun, excessive intake of water bitter guard increased sexual desire, may play a role in disturbing the normal function of Vali.

FUNCTIONS OF DERANGED VALI:

(Altered function of Vali)

"Å¡¾§Á ¸¾ò¾ §À¡Ð Å¡Ô× ¦ÁØôÀ¢ Á¦Ùõ
Å¡¾§Á Â¢ÕÁ Ä¡¸ò ¦¾¡¼ó¾Î ï ºýÉ¢ Å¡¾õ
§À¾§Á ¦ºö¸¢ Ã¡½¢ ¦ÀÚÅÂ¢ Ú¾¡ §¾¡ñõ
§À¡¾§Å §¾¡ýÚ ¦ÁýÚ ¦À¡Õó¾§Å ÓÉ¢Å÷ ¦º¡ýÉ¡÷
Å¡¾§Á Ó¾Ä¡ ¿¡Ê Å¡¾§Á àÄ ¸¡Âõ
Å¡¾§Á ¦ÀÄÅ¡ É¡Ìõ ÂÆ¨Ä §Åñ Îõ
Å¡¾§Á Áó¾õ ÀüÚõ Å¡¾§Á º¾ ¸¡Äõ
Å¡¾§Á Ô¼ü Ì ñ÷îº¢ Å¡¾§Á ãÄÁ¡§Á
Å¡¾§Á Å¡Ô Å¡Ìõ Å¡¾§Á ¸¡Ä¢ü §ºÕõ
Å¡¾§Á ¿ýÉ¢ §Â¡Î ÁÕÅ¢Êø ÅÄ¢Ô Ó ñ¼¡õ
Å¡¾§Á Å¢ÊÂôÀòÐ Å¡¾§Á º¡Âí ¸¡Äõ
Å¡¾§Á Ò ñ¢ôÒÅ¡íÌõ Å¡¾Óó ¾ñ÷îº¢ ¸¡Äõ

-ÀÃÃ¡º§º¸Ãõ

According to Paraaasasekaram the deranged Vali will produce cough, delirium, diarrhea and abdominal distension.

"Å¡¾Å¢Ú «ý ÉÁ¢È í¸¡Ð ¸Îôò ñ¼¡õ Å ñ½Ó ñ¼¡õ
§Á¡Ð¸ðÌ §Ã¡¸õ ÍÃÓ ñ¼¡õ
Á¢ÕÁÖÁ¡ ÓÈ í¸¡¦¾ýÚõ"

-§¾¨ÃÂ÷ Å¡¸¼õ

According to the Sage Theraiyar, the deranged Vali produces reduced appetite, fever, cough, and insomnia.

"¦ºöÂ§Å Å¡¾ò¾¡ø ÅÕ§¿¡ö ¦º¡ø§Åý
º¢ì¸¢ÁÄ ºÄ í¸Îò¾ Ö¨ 6π¾ø Ìò¾ø
¨¿Â§Å ¸¸ÚòÐì ¸ñ½÷ Å¢úóÐ
¿¡îº¢¾È¢ ¦ÅÊòÐÅ¡ö ¾¢ì¸¢ §Àºø
¦Áö¾ÊòÐ Á¢¸§¿¡¾ø ¦À¡ÕÁø ¦¸¡û6πø
Å¢óÐÅÄ¢ ¾¡ý Ì¨ÈóÐ Áó¾Á¡¾ø
¨ÀÂ§Å Ì6π¢÷ó¾¢Õ¾ Ä¡ý ¦ÅøÄ¡õ
ÀÄÅ¡¸ì ¸ñ¼È¢óÐ º¢ó¾ôÀ¡§Â"

-« í¸¡¾¢À¡¾õ

À¡í¸¡É Å¡¾ó¾¡ý Á¢ÚÁ¡¸¢ü
ÀÕÅÂ¢Ú ÍÅ¡ºÓ¼ý Ìòì§¸¡¨Æ
¿¦í¸¡¾ À¢ÊôÒ×¨6π Å¡Ô ¦¾¡ó¾õ
¿÷¦ÅÊòÐô À¡ö¾ø Áó¾õ Å¢¼Á¢ôÀ¡¾ø
à íÌºý É¢ Å¡¾ÍÃ Á¾É¢ü §¾¡¼õ
¦¾¡Ìò¾ ¸¢Ã¡ ½¢ì¸Æ¢îº Ö¾Ã §¾¡¼õ
Å¡íÌÀÄ ÅÄ¢Ì6π¢÷îº¢ Ìý Á Å¡¾
ÁÄºÄ¸ð Ê¼øÅ¡¾ Åó¾¢ôÀ¡§Á.

-« í¸¡¾¢À¡¾õ.

According to Angaathipatham the deranged Vali produces constipation, scanty micturition, and increased lacrimation, with darkening of eyes, fissures in tongue, dysarthria, flatulence, abdominal distension, and cough with expectoration, indigestion and diarrhoea.

“¸¡½ôÀ¡ Å¡¾Á¢Ø ¸¡ø¨¸¸û ¦À¡ÕóÐ §¿¡×õ
â½ôÀ¡ Ì¼øÒÃðÎõ ÁÄºÄõ ¦À¡ÕÁ¢ì ¸ðÎõ
°½ôÀ¡ Ì⅄ÕÍ ¸¡öîºø ¯¼õ¦ÀøÄ¡õ ÌòÐÅ¡ö×
Å¢½ôÀ¡ Ì¾Á¢Ú ì Ìõ Å¢Â÷¨ÅÔõ §Å÷ì Ìõ ¾¡§É”.

-«¸ò¾¢Â÷ ¨Åò¾¢Â ¸¡Å¢Âõ 1500

According to Agathiyarvaithiyakaaviyam, the deranged Vali produces pain in the joints of the hands and legs, flatulence, constipation, scanty micturition, fever with rigor, generalized body pain and increased sweating.

“¾ì¸ Å¡Ô §¸¡À¢ò¾¾¡ø ºóÐ×¨⅄óÐ ¾¨Ä§¿¡Å¡
Á¢ì¸ ãÃ¢ ¦¸¡ð¼¡Å¢ Å¢ð¼í ¦¸ÃŢÔ ÁÄí¸ðÎõ
´ì¸ ¿ÃõÒ ¾¡ý Ó¼íÌ ÓÄ÷óÐÅ¡¿¦ ÕÈ¢ÅÕõ
Á¢ì¸ Ì⅄Õõ ¿Îì¸ÓÁ¡õ §ÁÉ¢ Ìý È¢ ÅÕí¸¡§½”.

-§¾¨ÃÂ÷ Å¡¸¼õ

According to Theraiyarvagadam, the deranged Vatham produces pain in the joints, headache, constipation, increased salivation, chills with rigor, loss of normal complexion.

¬¸í¸Ú ì Ì§¿¡ Â¡¸ó ÐÊì Ìõ
¬È¡ò¾¢ ¦Âý É¦Áö §Â¸í ¦¸¡¾¢ì Ìõ
¬Õ¦Áö Å¢Â÷¾¢Â¢÷ Å¦Áó¾õ Å¡öãîÍ
¬ Ì§ÁÂ¢Ð Å¡¾§ÁÄ¢É¢.

-§¾¨ÃÂ÷ ¸Ã¢ºø

According to Theraiyarkarisal, the deranged vatham produces blackish discoloration of body, feverishness increased sweating, indigestion and dyspnea.

§ÁÅ¢ÂÅ¡¾ï ¦ºöÔí Ì½ó¾ý¨½ Å¢ÂõÀì §¸⅄¡ö
¾¡Å¢§Â ÅÂ¢Ú ¾ó¾ï ºóÐ¸û ¦À¡ÕòÐ §¿¡Å¡ï
º¦Å¢Â ¾¡Ð¿¡ºï ¦ºÚòÐ¼ý º¢Ú¿÷ Å¦Øí
¸¡Å¢Â ¸ñ½¢ É¡§⅄ ÁÄÁÐ ¸Õ¸¢Å¢Øõ.

-«¸ò¾¢Â÷ Å¡¾ ¸¡Å¢Âõ 1000

According to Agathiyarvathakaaviyam and kannusamiyam the deranged Vatham produces abdominal discomfort, pain in joints, oliguria, dysuria, constipation flatulence.

KINDS OF VATHAM-10

Ó ¨ È ¨ ÁÂ¡ õ À¢Ã¡ ½ § É¡ ¼À¡ ¨ É ý Å¢Â¡ É ý
ã÷ì ¸Á¡ Ó¾¡ É ¦ É¡ Î ºÁ¡ É É¡ ¸ ý
¾¢È ¨ ÁÂ¡ ö Ü÷Á§ É¡ Î ¸¢Õ ¸¢ Ãý È¡ ý
§¾Å¾ò¾ ¦ É¡ Î¾É ï ºÂÛ Á¡ Ì õ.
-ä ¸¢ ¨ Åò¾¢Â º¢ó¾¡ Á½¢

Even though the vatham is a single functional unit, it has gotten different forms and actions.

10 Different Kinds of Vatham

- Praanan(Respiratory functions)
- Abaanan(Excretory functions)
- Viyaanan(Perfusion of oxygen & nutrients)
- Samaanan(Homeostatic functions)
- Udhaanan(Reverse peristalsis)
- Naagan(Higher intellectual functions)
- Koorman(Constrictory functions)
- Kirukaran(Secretory functions)
- Devathathan(Mental &physical sluggishness)
- Dhananjeyan(Bloater of the body)

CLASSIFICATION OF VATHAM IN CLASSICAL LITERATURE:

Table-2 Classical Literature

S.NO	NAMES OF THE BOOKS	TYPES OF VATHAM
1.	Yugi vaithiya cinthamani	80
2.	Astanga sangiramam	85
3.	NoiNaadal Noi MudalNaadal vol 2	81
4.	Theraiyar vaagadam	81
5.	Dhanvantri vaithiyam	81
6.	Jeeva rakshamirtham	80
7.	Agathiyar -2000	80
8.	Boharvaithiyam	84
9.	Agathiyar kurunaadi	84
10.	Agathiyar rathnachurukkam-500	84
11.	Pararasasekaram	80

MIRUTTHU VAATHAM

Vatha rogam has so many classification.Miruththu vaatham is one of the 80 types of vatha disease.

The dissertation subject Miruththu vaatham is form Yugi vaiththiya cinthamani ,

ÁtÕòÐ Å¡¾õ

“ÁÕÅÄ¡õ ÓÊÂ¡Å¡ö ¾É¢¦Ä¡ Ðí¸¢

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CLINICAL FEATURES

- Abdominal discomfort
- Constipation
- Diarrhoea
- Fatigue
- Dropsy
- Weariness of limbs and
- Fear.

PATHOGENESIS OF MIRUTTHU VAATHAM:

The basic constitution of the body is made up of 96 Thathuvams. Due to diet and other activities 96 Thathuvams get deranged and result in diseases, either pertaining to body or mind.

DERANGED 96 THATHUVAS ARE AS FOLLOWS

1. AYMBOOTHAMS (FIVE ELEMENTS)

Thee - Fatigue and Fear

2. IYMPORIGAL (PENTA SENSORS)

Mei –Tenderness in abdomen region

3. KANMENTHIRIYAM/ KANMAVIDAYAM (MOTOR ORGANS)

Eruuvai -Constipation and Diarrhoea

4. NAADI (DIFFERENTIAL PULSE PERCEPTION)

Kugu-Constipation and diarrhoea

5. AADHAARAM (STATIONS OF SOUL)

Moolathaaram - Constipation and diarrhoea

Swathitanam - Abdominal discomfort

Manipooragam- Abdominal discomfort

6. MANDALAM

Thee mandalam – Abdominal discomfort

Gnayiru mandalam- Abdominal discomfort

7. PATHINAANGU VEGANGAL (NATURAL URGES/REFLEXES)

Abana vayu - Constipation

Malam -Weariness of limbs

Kottavi - Abdominal discomfort

Pasi - Weariness of limbs

Suvasam - Abdominal discomfort

8. AASAYAM:

Malavasayam- Constipation and Diarrhoea

9. DERANGED UYIR THATHUKKAL

(HUMORAL OR TRIDOSHA PATHOLOGY)

Panchaboothams manifests in the body as three vital forces, Vatham, Pitham, Kabham

DERANGED OF VATHAM OR VAYU

In Mirutthu vaatham, primarily affected vayukkal are Abanan, Viyanan, Samaanan and Devathathan.

Types of vatham	Derangements
Abanan	Constipation and Diarrhoea
Viyanan	Weariness of limbs
Samanan	Weariness of limbs
Devathathan	Fatigue

DERANGED OF PITHAM

In Mirutthu vaatham, primarily affected Pitham components are saathagapitham.

Types of pitham	Derangements
Saathagam	Difficulty to concentrate work due to weariness of limbs

DERANGED OF KAPHAM

In Mirutthu vaatham,, primarily affected kabam are Avalambagam and Santhigam

Types of Kabam	Derangements
Avalambagam	Santhigam affected
Santhigam	Weariness of limbs

10. DERANGED UDAL THATHUKKAL

Saaram	-	Fatigue
Senneer	-	Fatigue
Oon	-	Weariness of limbs

11. KOSAM (BODY SYSTEMS)

a) Annamaya kosam – Affected

Anamaya kosam is affected because 7 Udal thathukkal forming the Kosam are affected.

b) Pranamaya kosam-Affected

Pranamaya kosam is affected because Kanmenthiriyangal forming this kosam are affected.

c) Manamaya kosam – Affected

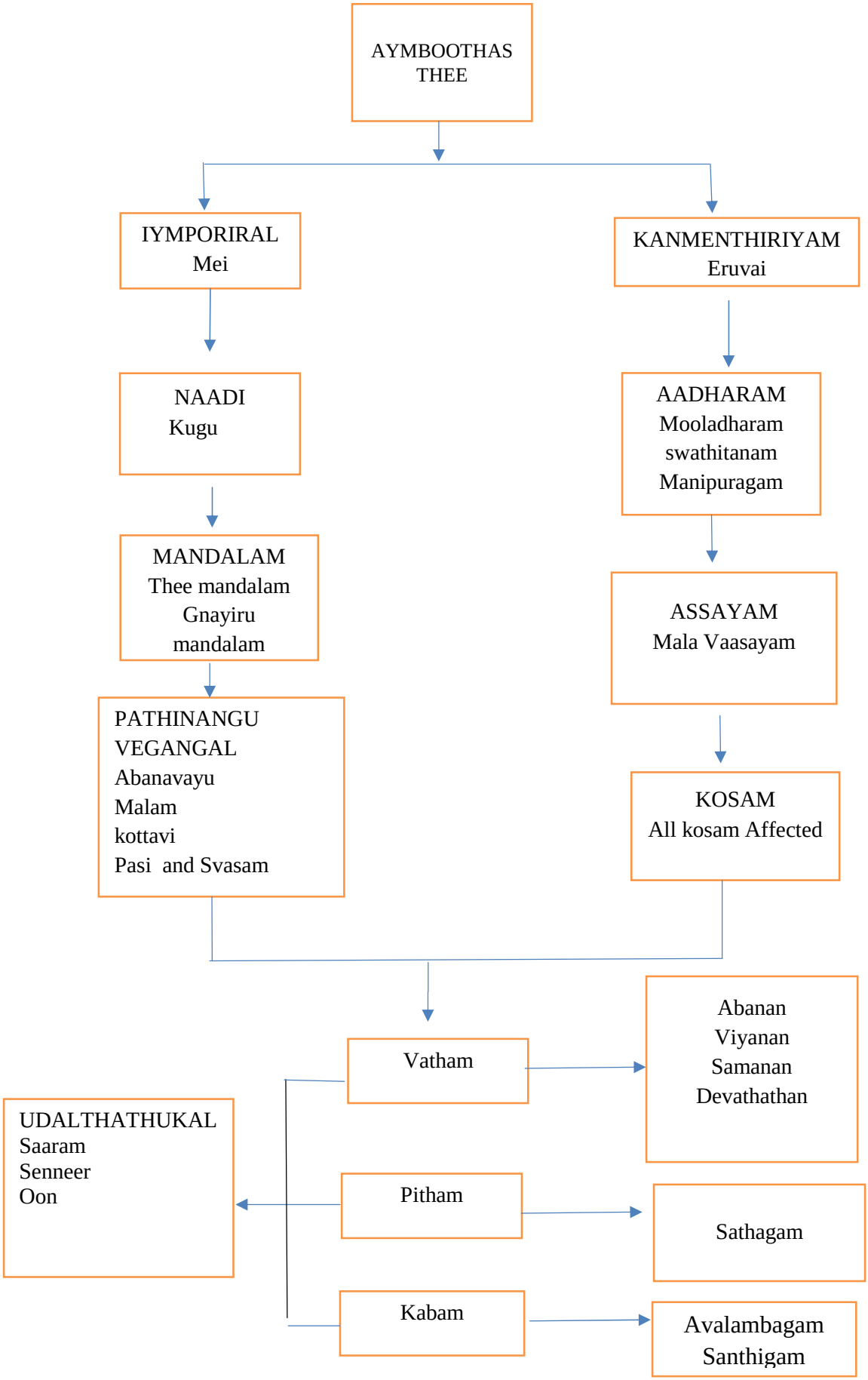
It is affected because patient will be fear due to illness.

d) Vignaanamaya kosam – Affected

It is affected because Gnanaenthiriyangal forming this kosam are affected.

e) Aanandhamaya kosam – Affected

It is because patient will be unhappy due to illness.


AYMBOOTHAS THEE
IYMPORIRAL Mei
KANMENTHIRIYAM Eruvai
NAADI Kugu
AADHARAM Mooladharam swathitanam Manipuragam
MANDALAM Thee mandalam Gnayiru mandalam
ASSAYAM Mala Vaasayam
PATHINANGU VEGANGAL Abanavayu Malam kottavi Pasi and Svasam
KOSAM All kosam Affected
Vatham
Abanan Viyanan Samanan Devathathan
UDALTHATHUKAL Saaram Senneer Oon
Pitham
Sathagam
Kabam
Avalambagam Santhigam

7.DIFFERENTIAL DIAGNOSIS

DISCUSSION OF DIFFERENTIAL DIAGNOSIS BETWEEN MIRUTTHU VAATHAM AND **MALAVARANA VAATHAM**

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As per Sage yugi's text, *Mirutthu Vaatham* is characterized by abdominal discomfort, constipation, diarrhoea, fatigue, dropsy, weariness of limbs and fear.

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As per Thanvanthiri text *Malavaarana Vaatham* is characterized by constipation, grey hair and weak body.

SIMILARITIES

Table-3 Differential diagnosis

MIRUTTHU VAATHAM	**MALAVARANA VAATHAM**
"±ÕÅÄ¡ §ÂÈ¢Å Â¡øÑ¨Ãô ÀðÊ ÊÚ¸¢§Â" Becoming hard ,As in constipation	"Ì ÄÅ¢Â ÁÄ ï º¢ÚòÐ ¦¸¡ ñ¼È¢ó¾È¢óÐ §¿¡Å¡ó" Constipation
"ÐÕÅÄ¡ö ÁÄó¾û Ù ï " Alvine discharge.	"ÁÄÓÄ÷óÐ¾û Ùõ" Alvine discharge(Drying)
"Í Ú ì ¦¸ý Ú ¸¡ø¨¸Ô ï §º¡÷óÐ §À¡ Ìõ" Exhaustion of limbs and fatigue	"ÀÄÁÐ Ì ýÈ¢ ¯¼ø¾ñ÷ó¾ Ì ½¸ ñ¼¡ü" Weak body

DISSIMILARITIES

Table- 4 Differential diagnosis

MIRUTTHU VAATHAM	**MALAVARANA VAATHAM**
"§º¡¨À Â¡ Ìõ" Anaemia with plethora	"¾¨ ÄÁÂ¢÷ ¿¨Ãì Ìõ" Grey hair

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As per Yugi's text *Azhal ninakazhichal* is characterized by constipation, gurgling in the abdomen, distension of the abdomen, indigestion, belching from acidity of the stomach, salivation, weariness of limbs, growing lean and diarrhoea.

SIMILARITIES

Table-5 Differential diagnosis

MIRUTTHU VAATHAM	**AZHAL KAAL NINAKKZHISSAL**
"±ÕÅÄ¡ §ÂÈ¢Å Â¡øÑ¨ÃôÀðÊ ÊÚ¸¢§Â" Becoming hard ,as in constipation	"¸ ñ Î ¦ ¸ ¡ û Ù ÁÄó¾¨ É§Â Â¢Ú ì ¸¢ì ¦ ¸ ¡ ñ Î" Constipation
"Í Ú ì ¦ ¸ ýÚ ¸ ¡ ø ¨ ¸ Ô ï §º¡÷óÐ §À¡ Ì õ" Exhaustion of limbs and fatigue	"Å¢ ñ Î ¦ ¸ ¡ ñ ¼ ¸ ¡ ø ¨ ¸ Ô Áº¾¢Â¡ Ì õ" Exhaustion of limbs and fatigue

DISSIMILARITIES

Table-6 Differential diagnosis

MIRUTTHU VAATHAM	**AZHAL KAAL NINAKKZHISSAL**
"§¾¸ ¦ÁøÄ¡õ ÅÄ¢ì Ì í ¸ ñ¼¡ö" Bodily pain	"§ÁÉ¢Ô§Á¡ Á¢¸ ì ¸Õ¸¢ ¦ÁÄ¢×Á¡ Ì õ" Growing lean

«Æø ¦ÀÕ í ¸Æ¢î ºø

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«¾¢¸Á¡ö ÅÈ ñ Î§Á Ñ¨Ã¾¡ý À¡Ôõ
Å¡ ¦ÁýÈ Å¡Ô¾¡ý Á¢¸ × ñ ¼¡ Ì õ
ÅüÈ¢§Â ¯¼õ ¦À í Ì í ¸ ¡ ø ¨ ¸ Å¦ í Ì õ
¸ ¡ ¦ÁýÈ ¸Ä í ¸ ¡ ö î º ø §À¡Ä ì ¸ ¡ Ôõ
¸Õ¾¢§Â ¯¼õ ¦À í Ì õ ¦Å ñ ¨ÁÂ¡ Ì õ
¾¡ ¦ÁýÈ ¾¨ ÄÅÄ¢òÐ Å¡ó¾¢ Â¡ Ì ï
ºÁÃºÁ¡õ À¢ò¾¡¾¢ º¡Ã Á¡§Á".

-ä¸¢ ¨ Åò¾¢Â º¢ó¾¡Á½¢

As per Yugi's text *Azhal perunkazhichal* is characterized by constipation, flatulency, dropsy, fever ,anaemia, headache and vomiting.

SIMILARITIES

Table-7 Differential diagnosis

MIRUTTHU VAATHAM	AZHAL PERUNKAZHISSAL
“±ÕÅÄ¡ §ÂÈ¢Å Â¡øÑ¨Ãô ÀðÊ ÊÚ¸¢§Â" Becoming hard ,As in constipation	"ÁÄó¾¡Ù Á ï º6π¢òÐ «¾¢¸Á¡ö ÅÈ ñ Î §Á" Constipation
"§º¡¨ÀÂ¡Ìõ" Anaemia with plethora	"ÅüÈ¢§Â ¯¼õ¦ÀíÌí ¸¡ø¨¸ Å¢íÌõ ¸¡¦ÁýÈ ¸Äí¸¡öîºø §À¡Äì ¸¡Ôõ ¸Õ¾¢§Â ¯¼õ¦ÀíÌõ ¦Åñ¨ÁÂ¡Ìõ" Anaemia with plethora

DISSIMILARITIES

Table-8 Differential diagnosis

MIRUTTHU VAATHAM	AZHAL PERUNKAZHISSAL
"¸¡ø¨¸Ô ï §º¡÷óÐ §À¡Ìõ" Exhaustion of limbs and fatigue	"¾¡¦ÁýÈ ¾¨ÄÅÄ¢òÐ Å¡ó¾¢Â¡Ì ï " Headache and vomiting

8. MODERN ASPECT

A.HISTOLOGY OF THE LARGE INTESTINE

From the upper end of the oesophagus upto the lower end of anal canal the alimentary canal has the from of a fibromuscular tube. The wall of the tube is made up of the following layers.

A. The inner most layer is the **mucus membrane** that is made up of

1.The lining epithelium

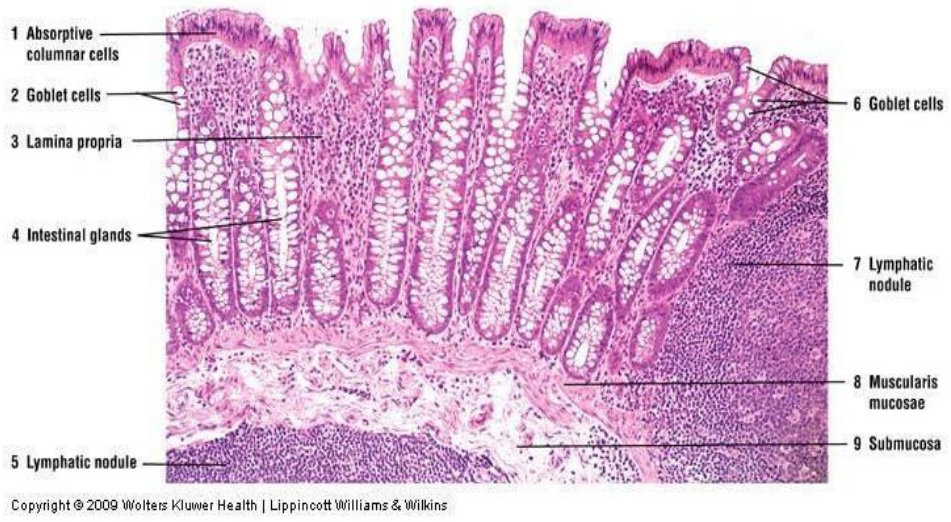
2.A layer of connective tissue ,the **lamina propria**,that supports the epithelium

3. A thin layer of smooth muscle called the **muscularis mucosae.**

B. The mucous membrane rests on a layer of loose areolar tissue called the **submucosa.**

C. The gut wall derives its main strength and form because of a thick layer of muscle (**muscularis externa)** that surrounds the submucosa.

D. Covering the muscularis externa there is a **serous layer** or an **adventitial layer.**



The mucous membrane of the colon shows numerous crescent-shaped folds. There are no villi. The mucosa shows numerous closely arranged tubular glands or crypts similar to those in small intestine. The mucosal surface, and the glands are lined by an epithelium made up predominantly of columnar cells with a striated border. Their main function is to absorb excess water and electrolytes from intestinal contents.

Many columnar cells secrete mucous and antibodies (IgA). The antibodies provide protection against pathogenic organisms. Numerous goblet cells are present, their number increasing in proceeding caudally.

The mucous secreted by them serves as a lubricant that facilitates the passage of semisolid contents through the colon. Paneth cells are not present. Some endocrine cells, and some stem cells, are seen.

The epithelium overlying solitary lymphatic follicles (present in the lamina propria) contains M-cells similar to these described in the small intestine. Scattered cells bearing tufts of long microvilli are also seen. They are probably sensory cells.

The submucosa often contains fat cells. Some cells that contain PAS-positive granules, termed **muciphages**, are also present. These are most numerous in the rectum.

The longitudinal layer of muscle is unusual. Most of the fibres in it are collected to form three thick bands, the **taenia coli**. A thin layer of longitudinal fibres is present in the intervals between the taenia. The taenia are shorter in length than other layers of the wall of the colon. This results in the production of **sacculations** (also called **haustrations)** on the wall of the colon.

The serous layer is missing over the posterior aspect of the ascending and descending colon. In many situations the peritoneum forms small pouch-like processes that are filled with fat. These yellow masses are called the **appendices epiploicae.**

The Rectum

The structure of the rectum is similar to that of the colon except for the following.

1. A continuous coat of longitudinal muscle is present. There are no taenia.
2. Peritoneum covers the front and sides of the upper one-third of the rectum; and only the front of the middle third. The rest of the rectum is devoid of a serous covering.
3. There are no appendices epiploicae.

The Anal Canal

The anal canal is about 4 cm long. The upper 3 cm are lined by mucous membrane, and the lower 1 cm by skin. The area lined by mucous membrane can be further divided inti an upper part (15 mm) and a lower part (15 mm).

The mucous membrane of the upper 15 mm of the canal is lined by columnar epithelium. The mucous membrane of this part shows six to twelve longitudinal folds that are called the **anal columns.**

The lower ends of the anal columns are united to each other by short transverse folds called the **anal valves**. The anal valves together form a transverse line that runs all around the anal canal: this is the **pectinate line**.

The mucous membrane of the next 15 mm of the rectum is lined by non keratinized stratified squamous epithelium. This region does not have anal columns. The mucosa has a bluish appearance because of the presence of a dense venous plexus between it an the muscle coat. This region is called the **pecten** or **transitional zone.** The lower limit of the pectin form the **white line (of Hilton).**

The lowest 8 to 10 mm of the anal canal are lined by true skin in which hair follicles, sebaceous glands and sweat glands are present. Above each anal valve there is a depression called the anal sinus. Atypical (apocrine) sweat glands open into each sinus. They are called the **anal** (**or circumanal**) **glands**.

The anal canal is surrounded by circular and longitudinal layers of muscle continuous with those of the rectum. The circular muscle is thickened to form the **Internal anal sphincter**. Outside the layer of smooth muscle, there is the **external anal sphincter** that is made up of striated muscle.

Prominent venous plexuses are present in the submucosa of the anal canal. The internal haemorrhoidal plexus lies above the level of the pectinate line while the external haemorrhoidal plexus lies near the lower end of the canal.

B. ANATOMY OF LARGE INTESTINE

The large intestine extends from the distal end of the ileum to the anus and is 1.5 m long.

Its calibre is greatest near the caecum and gradually diminishes to the level of mid rectum.It enlarges in the lower third of the rectum to from the rectal ampulla above the anal canal .The large intestine differ from the small intestine in that it has a greater calibre it is for the most part more fixed in position.

Its longitudinal muscles ,though a complete layer is concentrated into three longitudinal bands, small adipose projection ,appendices epiploicae ,are scattered over the free surface of the whole colon.Moreover the colonic wall is puckered into sacculations which may in part ,be due to the presence of the taeniae coli,and which may be demonstrated on plain radiographs as incomplete septations arising from the bowel wall.The function of the large intestine is chiefly absorption of fluids and solutes.

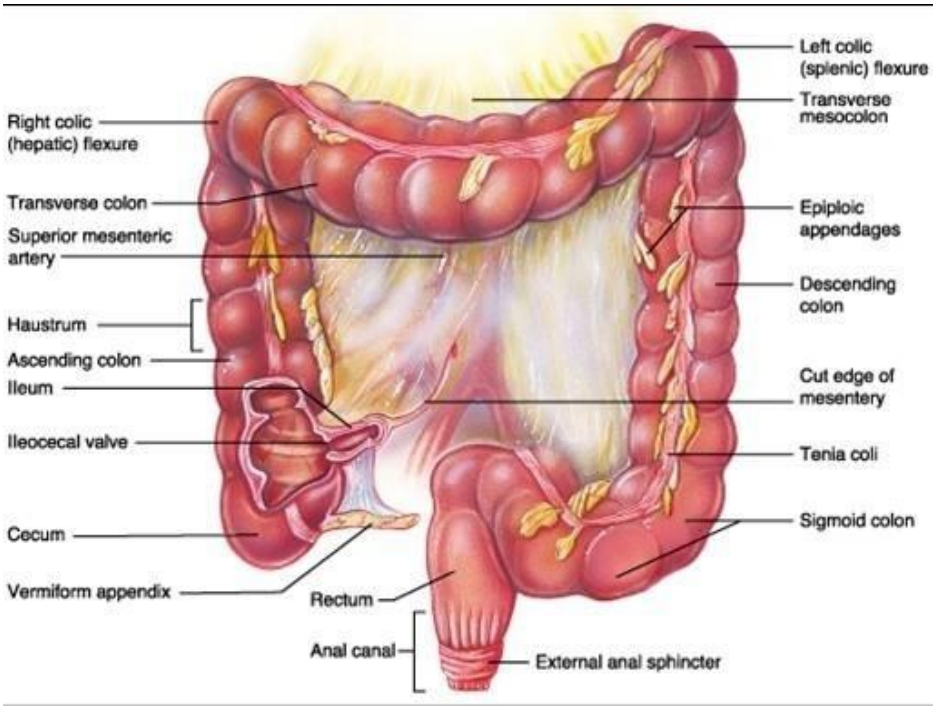
It is divided into

- Caecum
- Ascending colon
- Transverse colon
- Decending colon
- Sigmoid colon
- Rectum
- Anal canal

In the angle between caecum and the terminal part of the ileum there is a narrow diverticulum called the vermiform appendix.

The structure of the large intestine is adapted for storage of matter reaching it from the small intestine, and for absorption of fluid and solutes from it.

The epithelium is absorptive (columnar) but villi are absent .Adequate lubrication for passage of its contents is provided by numerous goblet cells scattered in the crypts as well as on the surface of the mucous membrane. The presence of numerous solitary lymphatic follicle provides protection against bacteria present in the lumen of the intestine.It enlarges in the lower third of the rectum to from the rectal ampulla above the anal canal .



Caecum:

Ceacum is a large blind pouch of large intestine lying in the right iliac fossa below the ileocaecal valve and continuing distally as the ascending colon. The blind ending vermiform appendix usually arises on its medial side at the level of ileal opening.Its average axial length is 6cm and its breadth is 7.5 cm.

It rests posteriorly on the right iliacus and psoas major, with the cutaneous nerve of thigh interposed. Posteriorly lies the retrocaecal recess which frequently contains the vermiform appendix.

The anterior abdominal wall is immediately anterior to the caecum except when it is empty, when the greater omentum and some loops of the small intestine may be interposed.

Usually the caecum entirely covered by peritoneum, but occasionally this is incomplete posterosuperiorly where it lies attached to the iliac fascia by loose connective tissue.

In early fetal life the caecum is usually short, conical and broad at the base, with an apex turned superomedially towards the ileocaecal junction. The caecum commences the process of fluid and electolytes reabsorption , which occurs to a large extent in the ascending and transeverse colon.

Ascending colon

The ascending colon is 15 cm long and narrower than the caecum.

It ascends to the inferior surface of the right lobe of the liver, on which it makes a shallow depression, and then turns abruptly forwards and to the left, at the hepatic flexure.

It is a retroperitoneal structure covered anteriorly and on both sides by peritoneum.

Its posterior surface is connected by loose connective tissue to the iliac fascia, the iliolumbar ligament, the quadratus lumborum muscles, the aponeurosis of transversus abdonimis, and the anterior peri-renal fascia inferolateral to the right kidney.

The lateral femoral cutaneous nerve, usually the fourth lumbar artery, and sometimes the ilioinguinal and iliohypogastric nerves lie posteriorly as they cross the quadratus lumborum muscles. Laterally the peritoneum forms the paracolic gutter.

The ascending colon possesses a narrow mesocolon for part of its course in up to one-third of cases. Anteriorly it is in contact with loops of ileum, the greater omentum and the anterior abdominal wall.

Transverse colon

The transverse colon is 50 cm long and extends from the hepatic flexure in the right lumbar region across into the left hypochondriac region, where it curves posteroinferiorly below the spleen as the splenic flexure.

It is highly variable in length and position, as may be confirmed by radiological assessment, but it often describes an inverted arch,with its concavity directed posteriorly and superiorly.

Near the splenic flexure an abrupt U-shaped curve may descend lower than the main arch. The posterior surface at the hepatic flexure is devoid of peritoneum and is attached by loose connective tissue to the front of the descending part of the duodenum and the head of the pancreas.

The transverse colon from here to the splenic flexure is almost completely invested by peritoneum, and is suspended from the anterior border of the body of the pancreas by the transverse mesocolon.

The latter is attached from the inferior part of the right kidney across the second part of the duodenum and pancreas to the inferior pole of the left kidney. The transverse colon hangs down between the flexures to a variable extend and sometimes reaches the pelvis.

Descending colon

The descending colon is 25 cm long. It descends through the left hypochondriac and lumbar regions, initially following the lateral border of the lower pole of the left kidney and then descending in the angle between psoas major and quadratus lumborum to the iliac crest.

It then curves inferomedially, lying anterior to iliacus and psoas major,to become the sigmoid colon at the inlet of the lesser pelvis. It is a retro-peritoneal structure covered anteriorly and on both sides by peritoneum.

Its posterior surface is separated by loose connective tissue from the anterior peri-renal fascia inferolateral to the left kidney, the aponeurosis of transversus abdominis, quadratus lumborum, iliacus and psoas major. The subcostal vessels and nerves, iliohyogastric and ilioinguinal nerves, fourth lumbar artery(usually),the lateral femoral cutaneous, femoral and genitofemoral nerves, the gonadal vessels and the external iliac artery all pass behind the descending colon.

Loops of jejunum lie anteriorly, if the anterior abdominal walls are relaxed, the most inferior part of the descending colon may be directly palpated trans abdominally.

The descending colon is smaller in calibre more deeply placed, and more frequently covered posteriorly by peritoneum, than the ascending colon.

Sigmoid colon

The sigmoid colon begins at the pelvic inlet and ends at the rectum. Characteristically it forms a mobile loop which normally lies in the lesser pelvis.

It is completely invested in peritoneum and is attached to the posterior pelvic wall and lower posterior abdominal walls by the fan-shaped sigmoid mesocolon. The root of the sigmoid mesocolon has an inverted ‘V” attachment to the posterior abdominal wall.

The sigmoid colon initially descends adjacent to the left pelvic wall, but then comes to lie in an extremely variable position. It may remain folded principally in contact with the peritoneum overlying iliacus, or it may cross the pelvic cavity between the rectum and bladder in males, or the rectum and uterus in females, and it may even reach the right pelvic wall.

If long, the sigmoid loop may rise out of the pelvis into the abdominal cavity and lie in contact with loops of ileum. The sigmoid loop ends in a relatively constant position lying just to the left of the midline at the level of the third sacral body, where it bends inferiorly and is continuous with the rectum. The sigmoid loop is fixed at its junctions with the descending colon and rectum but quite mobile between them.

Vermiform appendix

The vermiform appendix is a narrow vermian (worm shaped) tube which arises from the posteromedial caecal wall, 2cm below the end of the ileum.

It may occupy one of several positions. Thus it may be retrocaecal, retrocolic (behind the caecum or lower ascending colon respectively) pelvic or descending (when it hangs dependently over the pelvic brim, in close relation to the right uterine tube and ovary in females).These are the commonest positions seen in clinical practice.

Other positions are occasionally seen especially when there is a long appendix mesentery allowing greater mobility. These include subcaecal (below the caecus), preilial (anterior to the terminal ileum); postileal (behind the terminal ileum).

Rectum

The rectum is continuous with the sigmoid colon at the level of the third sacral vertebra and terminates at the upper end of the anal canal.

It descends along the sacrococcygeal concavity as the sacral flexure of the rectum, initially inferoposteriorly and then inferoanteriorly to join the anal canal by passing through the pelvic diaphragm.

The anorectal junction is 2-3 cm in front of and slightly below the tip of the coccyx which is opposite the apex of the prostate in males.

From this level the anal canal passes inferiorly and posteriorly from the lower end of the rectum.The posterior bend is termed the perineal flexure of the rectum and the angle it forms with the upper anal canal is termed the anorectal angle.

The rectum also deviates in three lateral curves.

The upper is convex to the right,

The middle (the most prominent) bulges to the left and

The lower is convex to the right.

Both ends of the rectum are in the median plane. These features suit its specialized role in defecation and continence in combination with the anal canal.

Anal canal

The anal canal begins at the anorectal junction and ends at the anal verge. It is angulated in relation to the rectum because the pull of the sling-like puborectalis produces the anorectal angle.

It lies 2-3 cm in front of and slightly below the tip of the coccyx, which is opposite to the apex of the prostate in males.

The anal verge is marked by a sharp turn where the squamous epithelium which lines the lower anal canal becomes continuous with the skin of the perineum.

The pigmentation of skin around the anal verge demarcates the extent of the external sphincter. Identification of the anal verge may be difficult, particularly in males in whom the perineum may 'funnel' upwards into the lower anal canal. However, the characteristic puckering of the external epithelium caused by penetrating fibres of the conjoint longitudinal layer makes a useful landmark.

The functional anal canal is represented by a zone of high pressure which roughly equates to the anatomical canal. The anal canal consists of an inner epithelial lining, a vascular subepithelium, the internal and external anal sphincters and fibromuscular supporting tissue.

It is between 2.5 and 5 cm long in adults although the anterior wall is slightly shorter than the posterior. It is usually shorter in females. At rest it forms an oval slit in the antero posterior plane rather than a circular canal due to the arrangement of the external anal sphincter.

C. PHYSIOLOGY

The ingested food items are passed along the entire length of the GI tract.The passage of ingesta is due to the motility of the GI tract.

The motility of the GI tract propels food from the oral end to the aboral end.This is done in such a manner that the digestion and absorption of the ingesta can take place in the different compartments of the digestive tract.

The movements of the GI tract bring about proper mixing the food with enzymes of the digestive juices and facilitate the process of absorption.The motility of the colon slowed down to permit its absorptive function.

The motor activity at the two ends of the digestive tract,the mouth and anus,are under voluntary control. The rest of the GI tract contain smooth muscle and are not under voluntary control.

GASTROINTESTINAL HORMONES

The gastrointestinal tract is the largest endocrine organ in the body.

The first hormone, secretin was isolated from the intestinal mucosa The GI mucosa contains hormone-secreting cells scattered along the entire length of the digestive tract. These cells secrete peptides and/ or amides that have an important role in the digestive function of the GI tract.

These peptides and amines are also present in the brain where they function as neuro hormones and neurotransmitters.

Endocrine cells of the tract

- G-cells in gastric antrum and duodenum.
- A,B,D and F-cells of the islets of Langerhans.
- I-cells in the duodenum and jejunum.
- K-cells in the duodenum and jejunum.
- EC-cells of many subtypes.

Functional characteristics of GI hormones

A large number of hormones are synthesized and secreted by the endocrine cells of the GI tract. These hormones show common functional characteristics.

They are peptides or amines**.**

They have homologous structures and can be classified into :

(a) Gastrin family and

(b)Secretin family.

They have paracrine actions and some of these have endocrine functions.

The important gastrointestinal hormones are

- Ø Gastrin
- Ø Cholecystokinin-Pancreozymin or CCK
- Ø Secretin
- Ø Gastric inhibitory peptide (GIP)
- Ø Motilin

Gastrin

- Gastrin is a peptide synthesized and secreted by the G-cells present in the antral gastric mucosa and the duodenum.
- The physiologically important forms of gastrin are called the **little gastrin (**G17)

Actions

G17 is the principal form of gastrin.Gastrin stimulates gastric acid secretion, pepsin secretion and stimulates gastric motility. Products of protein digestion act directly on the G-cells and cause gastrin secretion.

Regulation

- Gastrin secretion is affected by the contents of the stomach, vagus and systemic factors.
- Vagus stimulates gastrin secretion and this effect is not inhibited by atropine. Acid in the stomach inhibits gastrin secretion and this acts as a negative feedback mechanism to regulate gastrin secretion.Acid in the stomach initially stimulates gastrin secretion, but when the acidity increases above an optimal level, it inhibits gastrin secretion.
- Epinephrine stimulates gastrin secretion.
- Other hormones like secretin, glucagon and GIP inhibit gastrin secretion.

Cholocystokinin-Pancreoxymin (CCK-PZ)

CCK-PZ is a single hormone secreted by the I-cells in the upper parts of the intestine.It is more commonly referred to as cholecytokin and denoted by CCK.

Actions

CCK causes contraction of the gallbladder.

- It enhances secretion of pancreatic juice rich in enzymes.
- It inhibits gastric emptying but increases intestinal motility.
- CCK potentiates the actions of secretin.

Regulation

Products of protein and fat digestion stimulate secretion of CCK.Aromatic amino acids and fatty acids are the most potent stimulants. The digestion products of protein and fat regulate the secretion of CCK by a positive feedback mechanism.

Secretin

Secretin was the first hormone to be demonstrated and identified.

Actions

- Secretin acts on the duct cells of the pancreas and the biliary tract and increases the secretion of a bicarbonate-rich alkaline aqueous pancreatic juice.
- It potentiates the action of CCK on pancreatic secretion.
- Secretion inhibits gastric acid secretion.

Regulation

Presence of digestion products of protein in the interstial lumen, and acidic luminal contents stimulate the secretion of secretin. The effect of acidity on secretin secretion helps to neutralize the acid chyme by a feedback mechanism.

Gastric inhibitory peptide (GIP)

GIP is secreted by the K-cells of the duodenum and jejunum.

Actions

- Initially, GIP was thought to inhibit gastric secretion and motility and hence the name. This effect is not seen in physiological doses.
- GIP along with gastrin, CCK and secretin facilitates digestion and absorption of foodstuffs.
- GIP stimulates secretion of insulin and helps in the metabolism of absorbed nutrients.

Motilin

- Motilin is secreted by the EC-cells in the duodenal mucosa.

Actions

- Motilin enhances intestinal motility and regulates interdigestive motility (MMC) of GI tract.

GASTROINTESTINAL MOTILITY

1. Mastication (chewing)
2. Deglutition (swallowing)
3. Gastric motility.
4. Movement of the small intestine
5. Activity of the ileocaecal valve and sphincter
6. Colonic motility.
7. Defaecation

1. Mastication

- Ø Mastication or chewing is a voluntary act. Mastication breaks up the food items in the oral cavity into smaller portions. In the process, the food items get mixed with saliva.
- Ø The soluble components in the food items dissolve in saliva and give rise to taste sensation.Even though large sized food items can be swallowed, they give rise to painful contractions of the oesophagus. Hence mastication is necessary.
- Ø Mastication is a coordinated muscular activity. It is brought about by the combined contractions of the muscles of the jaw and the tongue. The chewed food mixed with saliva, forms a bolus, which can be easily swallowed.

2.Deglutition

Swallowing follows mastication. It is initiated voluntarily and continued as a reflex act.The receptors are the tactile receptors in the oral cavity. The sensory impulses are integrated in the swallowing centre in the medulla and the pons.The efferent fibres are carried in the seventh, ninth and twelfth cranial nerves.

3.Gastric motility

The motility of the gastric musculature enables the stomach to fulfill its threefold functions.

1. Reservoir of food
2. Conversion of solid food into liquid chyme
3. Emptying of the gastric contents into the duodenum.

Reservoir of food

The fundus of the stomach functions as a reservoir of food. The fundus shows only changes in the tone of the muscle and does not exhibit intermittent contractions. As the food enters the stomach, the muscle fibres of the fundus increase in length to accommodate the food. This occurs without any increase in intra gastric pressure. This is known as **receptive relaxation**.

Conversion of solid food into liquid chyme

Presence of food in the stomach initiates waves of contraction in the body of the stomach. These occur at a rate of 3 to 4/min. These constrict the wall of the stomach and narrow the lumen as they progress towards the **antrum**.

These waves of contraction obliterate the lumen and press the food items against the pylorus. The contractions become forceful as digestion progresses. The contractions are more pronounced in the distal half of the stomach. The solid food particles are broken down, mix with gastric secretions and form semiliquid chyme.

Gastric emptying

The gastric contents enter the duodenum at a controlled rate.In gastric emptying the antrum, the pylorus and the upper duodenum function as a unit. Contraction of the antrum is followed sequentially by contractions of the pylorus and the duodenum. The pyloric opening regulates the rate of emptying , permitting only smaller particles from entering the duodenum.

4.**Movements of the Small Intestine**

The movements of the small intestine subserve two important functions:

- The movements mix chyme with the digestive juices and expose the chyme to maximum possible surface area for absorption.
- The movements are regulated in such a manner that the digesta move along the small intestine to ensure adequate absorption.

The small intestine exhibits three patterns of motility :

1.segmentation

2. peristalsis

3. migrating motor complex (MMC)

5.Ileocaecal valve and sphincter

The ileocaecal valve prevents the backflow of colonic contents into the small intestine. The valve protrudes into the lumen of the caecum. It closes when the pressure in the caecum becomes excessive.

The wall of the ileum immediately adjoining the ileocaecal valve has a thickened ileocaecal sphincter. Normally the sphincter is closed. Peristalsis in the terminal part of the ileum causes relaxation of the sphincter and permits entry of a small amount of chyme into the caecum.

Distension of the ileum reflexly relaxes the sphincter. Distension of caecum reflexly contracts the sphincter. The ileocaecal sphincter regulates the entry of chyme into the caecum in a manner that facilitates colonic absorption of water and electrolytes. The sphincter activity is controlled by the intramural plexuses.

6.**Colonic motility**

The colon has the larger diameter than the intestine and accommodates the undigested residues. The proximal parts are concerned with absorption and the distal parts store the undigested faecal matter.

In general, the motility of the colon is very sluggish. The sigmoid colon has higher tone and shows phasic motor activity.This slows down the movements in the descending colon and permits retention of maternal in the proximal colon for nearly 36 hours. Two types of motor activity are seen in the colon-segmentation and peristalsis.

The segmentation involves the circular muscles and since the longitudinal muscle is present in bands (taenia coli),this gives rise to haustrations.

The peristaltic type of contraction propels the contents of the colon.After ingestion of a meal, or before defaecation, peristaltic contractions occur over large segments and the colon becomes narrower and shorter. This is called mass peristalsis or movement.

7.Defaecation

The act of defaecation involves the rectum and the anal canal.The rectum is continuation of the sigmoid colon and leads into the anal canal. The anal canal is about 3cm long, is lined by squamous epithelium and has a rich sensory innervation.

The internal and external sphincters are present in the proximal and distal parts of the anal canal respectively. The internal sphincter is made of smooth muscle and receives innervation from the enteric plexuses and the autonomic nerves. The external sphincter is a skeletal muscle receives innervation from the pudendal nerve. The external sphincter is under voluntary control.

The rectum is normally empty of faecal matter,but the rest of the colon contains faecal matter. Containment of faecal matter is due to the tonic contraction of the sphincters and the acute angulation between the rectum and the anal canal.

The act of defaecation is under voluntary control. It involves both reflex and voluntary components. The integrating centre for defaecation is located in the sacral spinal cord and is under the control of higher centres in the brain. The pelvic sacral nerves are the major efferent pathways. Filling of the rectum with faeces stimulate the receptors in the rectum and pelvic floor, and the urge to defaecate arises. This results in the relaxation of the external sphincter and the puborectal muscle. Evacuation is assisted by a rise in the intra-abdominal pressure. The anorectal angle becomes straight and the contractions of the abdominal muscles help force the faeces through the relaxed sphincters.

Neural Control of Gastrointestinal Motility

The intrinsic activity of the smooth is regulated by the nervous system. The nerve fibres innervating the gut wall, course for long distances between the muscle cells and contain several swellings known as **varicosities.**

These varicosities contain transmitters, which are released into the interstitial fluid bathing the muscle cells.

Electrical coupling between bundles of muscle cells produce coordinated contraction of a region of the gut wall.

The nervous control of the gastrointestinal motility is brought about by the concerted activity of the enteric nervous system, the vagus and splanchic nerves.

The intrinsic **nerve plexuses** in the gut wall constitute the enteric nervous system. This system of complicated network of ganglion cells, interneurons, sensory and motor neurons mediate the peristaltic type of movement seen in the alimentary tract. These movements transport the food along the digestive tract.

The **prevertebral ganglia** modify the activity of separate and distinct areas of the gut. They receive information from the gut and the central nervous system, and mediate a number of visceral responses and reflexes.

The **vagus** provides parasympathetic innervation upto the transverse colon and the remainder by the pelvic sacral nerves. Nearly 90% of the fibres in the vagus are sensory and convey information from the mucosa and the muscle fibres. The vagal motor effects may be excitatory or inhibitory. Vagal fibres may excite one group of muscles but another group.

The sympathetic innervation of the GI tract is from the pre vertebral and paravertebral ganglia via the splanchnic nerves.The sympathetic fibres modify the activity of the gut. The sympathetic fibres have both sensory and motor functions. They serve to integrate information from other organs and produce coordinated responses in different parts of the digestive tract.

The parasympathetic fibres are **cholinergic** and the sympathetic fibres are **adrenergic**. In addition, there are present non-cholinergic, non-adrenergic inhibitory neurons, which release VIP or ATP.

Large Intestine Motility.

Segmental movements help in absorption H2O and salts. Frequency is 1-2/min and big haustrations are formed. Small intestinal segmental movements are different from large intestine in their regularity and haustrations in large intestine at a given time.

In the colon,peristaltic movement is known as mass movement, lasting for 3 min, causing colonic content to be propelled towards sigmoid colon.These contractions occur 3-4 times/day generally after meals and are induced by gastrocolic reflex. If there is gastric distension due to food, it increases peristaltic activity.Most of the food reaches caecum within 4-5 hours after eating, and it takes another 8-14 hours to reach sigmoid colon.

Secretions of Large Intestine

Muccus being the chief secretion ,helps to lubricate the faecal matter, is alkaline (pH 8-10) in nature.Bacteria in the colon cause production of gases like CO2,H2S and CH4 (methane).The flatus passed consists of N2 swallowed from the air during deglutition. Secretions are increased by tactile stimulation of mucosa, physiologically extrinsic innervation in colonic secretion is not very significant, but in diarrhoea and other diseases and parasympathetic activity causes increased mucous secretions as well as motility.

Composition of Large Intestinal Juice

The large intestinal juice contains 99.5% of water and 0.5% of solids.Digestive enzymes are absent in large intestinal secretion.The concentration of bicarbonate is high in large intestinal juice.

Functions of Large Intestinal Juice

Neutralization of Acids

Strong acids formed by bacterial action in large intestine are neutralized by the alkaline nature of large intestinal juice. The alkalinity of this juice is mainly due to the presence of large quantity of bicarbonate.

Lubrication Activity

The mucin present in secretion of large intestine lubricates the mucosa of large intestine and the bowel contents, so that the movement of bowel is facilitated. The mucin also protects the mucous membrane of large intestine by preventing the damage caused by mechanical injury or chemical substances.

Functions of Large Intestine

1.Absorption

Water and electrolytes are mainly absorbed in the proximal half of colon.Na^+,Cl^- and H_2O are also absorbed, but fatty acids, calcium ions and amino acids are not absorbed.

Vitamin K and B complex are synthesized by normal colonic bacteria and are absorbed in large intestine.

Antibiotics taken during various injections kill these harmless, but useful bacteria and that is why, the body need for vitamin B complex is increased and the vitamin B complex is prescribed, when broad spectrum antibiotics are used.

2.Storage

Faeces are stored until expelled by defaecation.

3.Formation of Feces

After the absorption of nutrients, water and other substances, the unwanted substances in the large intestine form feces. This is excreted out.

4.Excretory Function

Large intestine excretes heavy metals like mercury, lead, bismuth and arsenic through feces.

5.Secretory Function

Large intestine secretes mucin and inorganic substances like chlorides and bicarbonates.

6.Synthetic Function

The bacteria flora of large intestine synthesizes folic acid, vitamin B12 and vitamin K.By this function large intestine contributes in erythropoietic activity and blood clotting mechanism.

D. PATHOLOGY

IRRITABLE BOWEL SYNDROME

INDRODUCTION

Irritable bowel syndrome is a gastrointestinal disorder characterized by altered bowel habits and abdominal pain in the absence of detectable structural abnormalities. The Rome 2 criteria for the diagnosis of IBS at least 12 weeks which need not to be consecutive in the preceding 12 months of abdominal discomfort or pain that has two of following three features

1. Relieved by defecation
2. Onset associated with changes in stool frequency
3. Onset associate with changes in stool form.

Approximately 20%of patients with IBS identity a history of traveler's diarrhoea or gastro entritis (Eg ..salmonella, or campylobacter)preceding the onset of symptoms. Prospective studies of patients who develope gastroentritis suggest that one fourth continue to have chronic bowel symptoms and one in eight develops IBS.

True food allergy seems to be rare but food intolerance may be more important. Lactase deficiency may coexist with IBS., and Lactose intolerance may exacerbate symptoms. Excess ingestion of sorbitol or fructose may induce diarrhoea and bloating .

IBS is a disorder of the young,with most new patients presenting before age of 45. However some reports suggest that the elderly are troubled by IBS. symptoms up to 92% as often as middle aged persons.

Indeed many of the diagnosis of painful diverticular disease given to elderly patient may represent IBS.Women are diagnosed with IBS two to three times often as men. Moreover women make up 80% of the population with severe IBS .Patients with IBS fall into two broad clinical groups.

Most commonly patients have Abdominal pain associated with altered bowel habits that consist of constipation ,diarrhoea or both. In the second group ,patients have painless diarrhoea .

This symptoms in this group who account for <20% of patients with IBS, may be caused by a separate entity. In fact, painless diarrhoea does not strictly fullfill in Rome 2 criteria to be classified as IBS.

EPIDIOMOLOGY

Irritable bowel syndrome is one of the common gastro intestinal ailments condition which affects 20% of the general population

- The prevalence of IBS 4.2% in India.
- The prevalence of IBS In Europe and North America is estimated to be 10–15%.In Sweden, the most commonly cited figure is 13.5%.
- The prevalence of IBS is increasing in countries in the Asia–Pacific region, particularly in those with developing economies. Reported prevalence rates included 0.82% in Beijing, 5.7% in southern China, 6.6% in Hong Kong, 8.6% in Singapore, 14% in Pakistan, and 22.1% in Taiwan.
- The prevalence of IBS Nigerian student population found a 26.1% .

PATHOPHYSIOLOGY

The pathogenesis of IBS is poorly understood, although roles for abnormal gut motor and sensory activity, central neural dysfunction, psychological disturbances, stress, and luminal factors have been proposed.

ABNORMAL MOTOR FUNCTION

Colonic motor abnormalities are more prominent under stimulated conditions in IBS. IBS patients may exhibit increased rectosigmoid motor activity for up to 3 h after eating. Provocative stimuli also induce exaggerated colonic motor responses in IBS patients compared with healthy volunteers

IBS is associated with a generalized disorder of smooth muscle function, the colon, small bowel, upper gastrointestinal tract, gall bladder and urinary tract may be affected. Basal colonic motility is normal in IBS, but these patients tend to have an abnormally responsive colon to meals, drugs, gut hormones (e.g. chole cytokinin) and stress .The motility of the distal colon after meals (the gastro colic response)is augmented in patients with IBS and may explain why postprandial cramps or discomfort is common. Increased

lasting colonic contractions and rapid colonic transit in the proximal colon have been linked to diarrhoea, whereas a reduction of high amplitude propagated contractions in the left colon has been linked to constipation.

IBS patients have an increased area of referred pain after lipid ingestion .Hence, postprandial symptoms in IBS patients may be explained in part by a nutreint-dependent exaggerated sensory component of the gastrocolonic response. In contrast to enhanced gut where in the body.

Thus the afferent pathway disturbances in IBS appear to be selective for visceral innervation, with sparing of somatic pathways. The mechanisms responsible for visceral hypersensitivity are still under investigation. These exaggerated responses may be due to increased end-organ sensitivitywith recruitment of “silem” nociceptors, spinal hyperexcitability with activation of nitric oxide and possibly other neurotransmitters, endogenous (cortical and brainstem)modulation of caudad nociceptive transmission, and over time, the possible development of long-termhyperalgesia due to development of neuroplasticity, resulting in permanent or semipermanent changes in neutral responses to chronic or recurrent viscenil stimulation.

Abdominal pain of IBS has been associated with an exaggerated ileal response with high postprandial pressure waves(prolonged propagated contractions).Fasting clusters of jejunal pressure waves(Discrete clustered contractions) occur in some patients with IBS appear to coincide with abdominal pain and disappear during sleep.

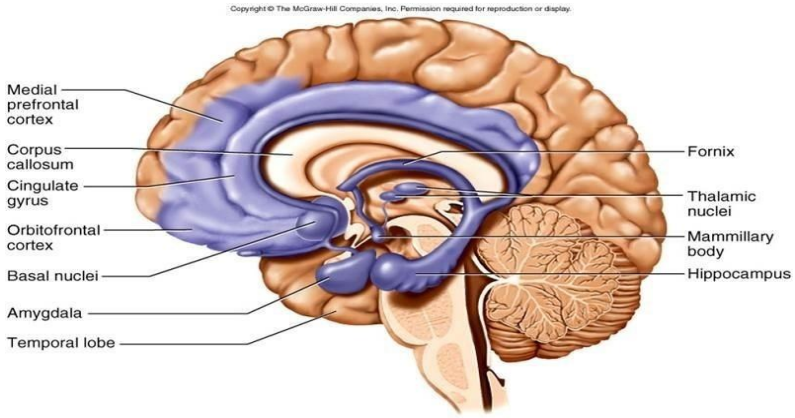
DISDURBED SENSATION

The vagal (and spinal)afferent nerves conduct sensory information from the gut through the dorsal horn neurons to the brain. Abnormal perception of gut sensation (visceral hypersenstivity) is a characteristic finging in IBS. In response to rectal or colonic distension by a ballon, a subset of patient with IBS series the distension at lower volumes and /or pressures than healthy person.

Many patients complain of unsatisfactory defecation or incomplete rectal emptying, which may be a direct result of excess rectal sensitivity. Repetitive rapid sigmoid distention induced rectal hypersensitivity in patient with IBS but not healthy controls. The mechanism that lead to increased gut visceral sensitivity are unclear and patient with IBS donot have generalised lower pain thresholds in other parts of the bodies .

CENTRAL NERVOUS SYSTEM

The role of central nervous system(CNS) factors in the pathogenesis of IBS is strongly suggested by the clinical association of emotional disorders and stress with symptom exacerbationand the therapeutic responseto therapies that act on cerebral cortical sites.Positron emission tomography has been employed to quantify regional cerebral blood flow in IBS. IBS patients exhibit no increased blood flow in the anterior cingulate gyrus but slow activation or in anticipation of rectal distention.Activation of the frontallobes may activate a vigilance network within the brain that increases alertness. The anterior cingulatecortex and the prefrontal cortex appear to have reciprocal inhibitory associations. Thus, in patients with IBS, the preferential activation of the prefrontal lobe, without activation of the anterior cingulate cortex,may represent a form of cerebral dysfunction leading to the increased perception of visceral pain.



Abnormal psychiatric features are recorded in up to 80% of IBS patients,especially in referralcenters; however, no single psychiatric diagnosis predominates.Most of these patients demonstrate exaggetated symptoms in response to visceral distention, and this abnormality persists even after exclusion of psychological factors. Psychological factors also influence pain thresholds in IBS patients; stress alters sensory thresholds.

Thus, patients with IBS frequently demonstrate increased motor reactivity of the colon and small bowel to a variety of stimuli and altered visceral sensation associated with lowered sensation thresholds. These may result from CNS or enteric nervous system dysregulation. IBS may be induced by gastrointestinal infection.

“Postinfective” IBS occurs more commonly in women and affects younger, rather than older, patients and those who have a protracted acute diarrheal illness. The microbes involved in the initial infection are Campylobacter, Salmonella, and Shigella. Those patients infected with Campylobacter who are toxin-positive are more likely to develop postinfective IBS. Increased rectal mucosal enteroendocrine cells, T lymphocytes, and gut permeability are acute changes following Campylobacter enteritis that could persist for more than a year and may contribute to postinfective IBS.

The serotonin (5HT) - containing enterochromaffin cells in the colon are increased in diarrhea-predominant IBS patients compared to healthy subjects or to patients with ulcerative colitis. Furthermore, postprandial plasma 5HT plasma levels are significantly higher in diarrhea-predominant IBS patients compared to healthy controls. As 5HT plays an important role in the regulation of GI motility and visceral perception, the increased release of 5HT may contribute to the postprandial symptoms of these patients and provides a rationale for the use of 5HT antagonists in the treatment of this disorder.

CLINICAL FEATURES

ABDOMINAL PAIN

According to the Rome 2 criteria abdominal pain or discomfort is a prerequisite clinical features of IBS .

Abdominal pain in IBS is highly variable in intensity and location; it is localized to the hypogastrium in 25%, the right side in 20%,to the left side in 20%,and the epigastrium in 10%ofpatients.

It is frequently episodic and crampy, but may be superimposed on a background of constant ache. Pain may be mild enough to be ignored or it may interfere with daily activities. Despite this, malnutrition due to inadequate caloric intake is exceedingly rare with IBS.

Sleep deprivation is also unusual because abdominal pain is almost uniformly present only during waking hours. However patients with severe IBS often wake repeatedly during the night, and hence nocturnal pain is a poor discriminating factor between organic and functional bowel disease.

Pain is often exacerbated by eating or emotional stress and relieved by passage of flatus or stools. Female patients with IBS commonly report worsening symptoms during the premenstrual and menstrual phase.

ALTERED BOWEL HABITS

Alteration in bowel habits is the most consistent clinical feature in IBS.It usually begins in adult life.The most common pattern is constipation alternating with diarrhea, usually with one becomes continuous and increasingly intractable to treatment with laxatives.

Stools are usually hard with narrowed caliber, possibly reflecting excessive dehydration caused by prolonged colonic retention and spasm.Most patients also experience a sense of incomplete evacuation, leading to repeated attempts at defecation in a short time span.

Patients whose predominant symptom is constipation may have weeks or months of constipation interrupted with brief periods of diarrhea. In other patients, diarrhea may be the predominant symptom.Diarrhea resulting from IBS usually consists of small volumes of loose stools.Most patients have stool volumes of <200 mL.

Nocturnal diarrhea does not occur in IBS.Diarrhea may be aggravated by emotional stress or eating.Stool may be accompanied by passage of large amounts of mucus, hence the term mucous colitis has been used to describe IBS.

GAS AND FLATULENCE

Patients with IBS frequently complain of abdominal distention and increased belching or flatulence, all of which they attribute to increased gas. In addition, patients with IBS tend to reflux gas from the distal to the more proximal intestine, which may explain the belching

UPPER GASTROINTESTINAL SYMPTOMS

Between 25 and 50% of patients with IBS complain of dyspepsia, heartburn, nausea, and vomiting. This suggests that other areas of the gut apart from the colon may be involved. Prolonged ambulant recordings of small-bowel motility in patients with IBS show a high incidence of abnormalities in the small bowel during the diurnal (waking) period; The prevalence of IBS is higher among individuals with dyspepsia (31.7%) than among those who report no symptoms of dyspepsia (7.9%).

INVESTIGATION

- Flexible sigmoidoscopy.
- Colonoscopy
- X-ray (radiography)
- Computerized tomography (CT) scan.

LABORATORY TEST

- Lactose intolerance tests.
- Breath tests
- CBC
- Stool tests.

DIAGNOSIS

The diagnosis is clinical in nature and can be made confidently in most patients using the Rome criteria combined with the absence of alarm symptoms, without resorting to complicated tests. Full blood count and faecal calprotectin, with or without sigmoidoscopy, are usually done and are normal in IBS. Colonoscopy should be undertaken in older patients (over 40 years of age) to exclude colorectal cancer. Endoscopic examination is also required in patients who report rectal bleeding to exclude colon cancer and IBD. Those who present atypically require investigations to exclude other gastrointestinal diseases. Diarrhoea- predominant patients justify investigations to exclude coeliac disease, microscopic colitis, lactose intolerance, bile and malabsorption, thyrotoxicosis and, in developing countries, parasitic infection.

COMPLICATIONS

Hemorrhoids

Hamorrhoid are swollen veins located in the anus or the lower part of the rectum. Hemorrhoids are the most common lesions in people with IBS.It's been reported that 18% to 33% of people with IBS have hemorrhoids. Hemorrhoids are generally painless but may involve bleeding during bowel movements.

Hemorrhoids may be caused by the following:

- Straining during a bowel movement
- Constipation
- Sitting for long periods of time, especially while trying to have a bowel movement
- A low fiber diet
- Certain diseases

Malnutrition

Malnutrition may be a problem for some people with IBS, because certain foods that are important for health maintenance may be avoided to prevent triggering IBS symptoms. For instance, avoiding foods rich in fermentable oligo-, di-, monosaccharides and polyols (FODMAPs), which include wheat, rye, vegetables, fruits, and legumes, may lead to poor nutrition. Also, unhealthy food options may be used in place of FODMAPs, which may result in an unhealthy.

LINE OF TREATMENT AND DIET AND REGIMENS

Line of Treatment

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So the Siddha treatment is not only for removal of disease, but for the prevention and improving the body condition. This is said as follows.

1.Kaappu (Prevention)

2.Neekkam (Treatment)

3.Niraivu (Restoration)

Siddha system has unequivocally stated that even during the time of conception, some defects creep into the fertilized embryo.

The defects form the basis for the manifestation of certain constitutional diseases later on during the existence of the individual.

The disease for which no known cause is given are designated as diseases of idiopathic origin or hereditary disorders. In Siddha system such diseases are described as Karma noikal.

1.Kaappu (Prevention)

To prevent karma (idiopathic or hereditary diseases) the Siddha science has advocated preventive measures to be taken into consideration even while arranging for marital alliances the object of which is to be get healthy pregnancy to build a robust and healthy nation. The rules affecting healthy alliances have been elaborately described in the science of Astrology. They married on the basis of physical, emotional, intellectual and social compatibility.

2. Neekkam (Treatment)

The Three UyirThathus which are responsible for organization, regularization and integration of the bodily structures and their physiological functions are always kept in a state of equilibrium by word, thought, deed and food of the individual. The general aetiological factors for constitutional discomfort is said to be incompatible diet, mental and physical activities.

When treating for removal of the diseases, the following principles must be noted.

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So it is essential to know the disease and the cause for the onset of the disease, before treating the patient so also to the nature of the patient, the severity of illness, the season and time of the occurrence of the diseases must be observed.

Clinical Management for Disease Condition

- Normalization of altered uyirthathukal
- Internal medicines
- Asanas
- Diet

Normalization of Altered Uyirthathukal

1. Ennaikuliyal(oil bath)
2. Kazhichalmaruthuvam(purgation)

   “Å§Ãº É¾¡ø Å¡¾õ ¾¡Øõ”
3. Internal medicines

   Noikkanachooranam,parpam, chendooram, kudineer, leghyam.
4. Aasaanams
5. Diet

PREVENTIVE ASPECTS TO AVOID MIRUTTHU VAATHAM

- Have regular meals. Take time to eat.
- Don't skip meals or wait too long between meals.
- Drink plenty of fluids.
- Limit coffee and tea to 3 cups a day.
- It might help to limit the amount of high-fiber foods you eat, especially if you have a lot of gas and bloating. This especially includes whole grain breads, cereals, pasta, and rice.
- Reduce the amount of "resistant starch" you eat. Resistant starch isn't digested well by your body and can cause gas and bloating. It is found in foods like cold or reheated potatoes, bread, and cereal.
- Limit your intake of fresh fruit to 3 portions a day.
- If you have gas and bloating, eating soluble fiber (such as oats) may help.

MANAGEMENT:

PATIENT COUNSELING AND DIETARY ALTERATIONS

Reassurance and careful explanation of the functional nature of the disorder and of how to avoid obvious food precipitation are important first steps in patient counseling and dietary change.

STOOL-BULKING AGENTS

High-fiber dies and bulking agents, such as bran or hydrophilic colloid, are frequently used in treating IBS. Dietary fiber has multiple effects on colonic pathology. The water-holding action of fiber may contribute to increased stool bulk because of the ability of fiber to increase fecal output of bacteria. Fiber also speeds up colonic transit in most persons. Because of their hydrophilic properties, stool-bulking agents bind water and thus prevent both excessive hydration or dehydration of stool. The latter observation may explain the clinical experience that a high-fiber diet relieves diarrhea in some IBS patients.

ANTISPASMODICS

Clinicians have observed that anticholinergic drugs may provide temporary relief for symptoms such as painful cramps related to intestinal spasm. Physiological studies demonstrate that anticholinergic drugs inhibit the gastrocolic reflex; hence , postprandial pain is best managed by giving antispasmodic 30 min before meals so that effective blood levels are achieved shortly before the anticipated onset of pain.

ANTIDIARRHEAL AGENTS

Peripherally acting opiate-based agents are the initial therapy of choice for diarrhea-predominant IBS. Physiologic studies demonstrate increase in segmenting colonic contractions, delays in fecal transit, increase in anal pressure, and reductions in rectal perception with these drugs.

ANTI DEPRESSANT DRUGS

In addition to their mood-elevating effects, anti-depressent medications have several physiologic effects that may be beneficial in IBS. In diarrhea-predominant IBS patients , the tricyclic antidepressant imipramine slows jejunal migration motor complex transit propagation and delays ororectal and whole-gut transit, indicative of a motor inhibitory effect. Tricyclic antidepressants may be effective in some IBS patients. The selective serotonin reuptake inhibitor (SSRI) paroxetine accelerates ororectal transit, raising the possibility that this drug class may be useful in constipation-predominant patients.

ANTI FLATULENCE THERAPY

Patients should be advised to eat slowly; avoid chewing gum or drinking carbonated beverages; and avoid consuming artificial sweeteners, legumes and foods of the cabbage family.

SEROTONIN RECEPTOR AGONISTS AND ANTAGONISTS

Serotonin receptor antagonists have been evaluated as therapies for diarrhea-predominant IBS. Serotonin acting on $5HT_3$ receptors enhances the sensitivity of afferent neurons projecting from the gut. In human $5HT_3$ receptor antagonist such as alosetron reduces perception of painful visceral stimulation in IBS. It also induces rectal relaxation, increases rectal compliance , and delays colonic transit.

DIET AND RESTRICTION

Patient advised to take,

- Plenty of fruit and vegetables.
- Plenty of starchy carbohydrates. Examples include bread, rice, cereals, pasta, potatoes, chapattis and plantain.
- Some milk and dairy products (2-3 portions per day). If you are lactose intolerant include dairy alternatives such as soya, rice or oat milk and yoghurts that are enriched with calcium.
- Some protein foods: meat, fish, eggs and alternatives such as beans and pulses.
- Limited amounts of foods high in fats and sugars. Limit saturated fat that is found in animal products such as butter, ghee, cheese, meat, cakes, biscuits and pastries. Replace these with unsaturated fats found in vegetable oils such as sunflower, rapeseed and olive oil, avocados, nuts and seeds.
- Drink plenty of fluid - at least two litres daily, such as water or herbal teas.

Patient were advised to avoid

Many people find that their irritable bowel syndrome (IBS) symptoms become worse after they eat. Sometimes certain foods make symptoms worse. Foods most commonly listed as causing symptoms include:

- Cabbage.
- Onions.
- Peas and beans.
- Hot spices.
- Deep-fried and fried food.
- Pizza.
- Coffee.
- Cream.
- Smoked food.

Other types of food that can make IBS symptoms worse include:

- A sugar found in milk, called lactose. About 1 out of 10 people with IBS also have lactose intolerance. Other people with IBS may have worse symptoms when they eat dairy. It's not a good idea to stop eating dairy altogether. Instead, try dairy products (like cheese and yogurt) that have less lactose, and spread the amount of dairy you eat throughout the day.
- A sugar found in sweet vegetables and fruit, called fructose. In people with IBS, fructose may not be digested as it should. This can cause diarrhea, gas, and bloating.
- An artificial sweetener called sorbitol. If you have diarrhea, avoid sorbitol. It is found in sugar-free chewing gum, drinks, and other sugar-free sweets.
- Caffeine: Caffeine can make the intestines move food along more quickly. But the most common digestive tract side effect of caffeine is acid reflux. In people with IBS, caffeine may not have much effect on diarrhea, gas, or bloating.

Exercise

Patient advised to exercise regularly such as walking, cycling or swimming.

Yogasanam For Mirutthu Vaatham

Regarding Mirutthu vaatham the following asanas are advised to the patient

- Pavana muktasana
- Ardha matsyendrasana
- Adho mukha shvanasana
- Bhujangasana
- Dhanurasana

Pavana muktasana

Ardha matsyendrasana

Adho mukha shvanasana

Bhujangasana

Dhanurasana

3.NIRAIVU (RESTORATION)

Patients needs good discussion and motivation and persuation to accept the eventuality of Vatha disease and prepare for a lifestyle that provides optimization of metabolic status. In suitable effective medicinal preparations have to be administered in the beginning itself to neutralize and eliminate this disease.

Siddhars aimed at bringing the three doshas in equilibrium in the treatment of disease. Towards this end we treat with herbs and mineral preparations are used, while treating the Vatham level in the body. Siddhars prescribed a minimum dosage initially and then increased the dose gradually.

There are thousand preparations for Vatham and for its complications found in various Siddha text books Kudineer, Chooranams, Ilahams, Parpam and Senduram.

Siddha system lays a great importance on the observation of rules regarding diet in everyday life because the Siddha system has rightly realized, that the basic factor of the body is food. That is Annamayakosam is the first among the five kosams constituting our physical and mental existence. To prevent the occurrence of the disease, elaborate inference regarding food item in our daily diet is given in the textbook of Siddha,

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Generally when a medicine is administrated Siddha physician prescribes diet regimen according to the nature of the medicine and severity of the disease. As over intake or consuming unbalanced and incompatible diet is considered to be the prime causative factor for upsetting the Thirithosha balance leading to the manifestations of various ailments. Regarding diet regimen in Vatham there is special instructions found in Patharthagunasinthamani and other books.

10. MATERIALS AND METHODS

1. STUDY TYPE

Observational type of study

2. STUDY DESIGN

A Randomized case control study, single centric study.

3. STUDY PLACE

Out patient department and In patient department

National Institute of Siddha, Chennai-47

4. SAMPLE SIZE

Patients –30

Healthy Volunteers - 60

5. SELECTION CRITERIA

INCLUSION CRITERIA

Group I

- Age :30-50Yrs
- Abdominal discomfort
- Constipation
- Diarrhoea

Group II

- Fatigue
- Dropsy
- Weariness of limbs
- Fear

Patients who fulfill Group I and any 2 criteria in Group II will be included in this study

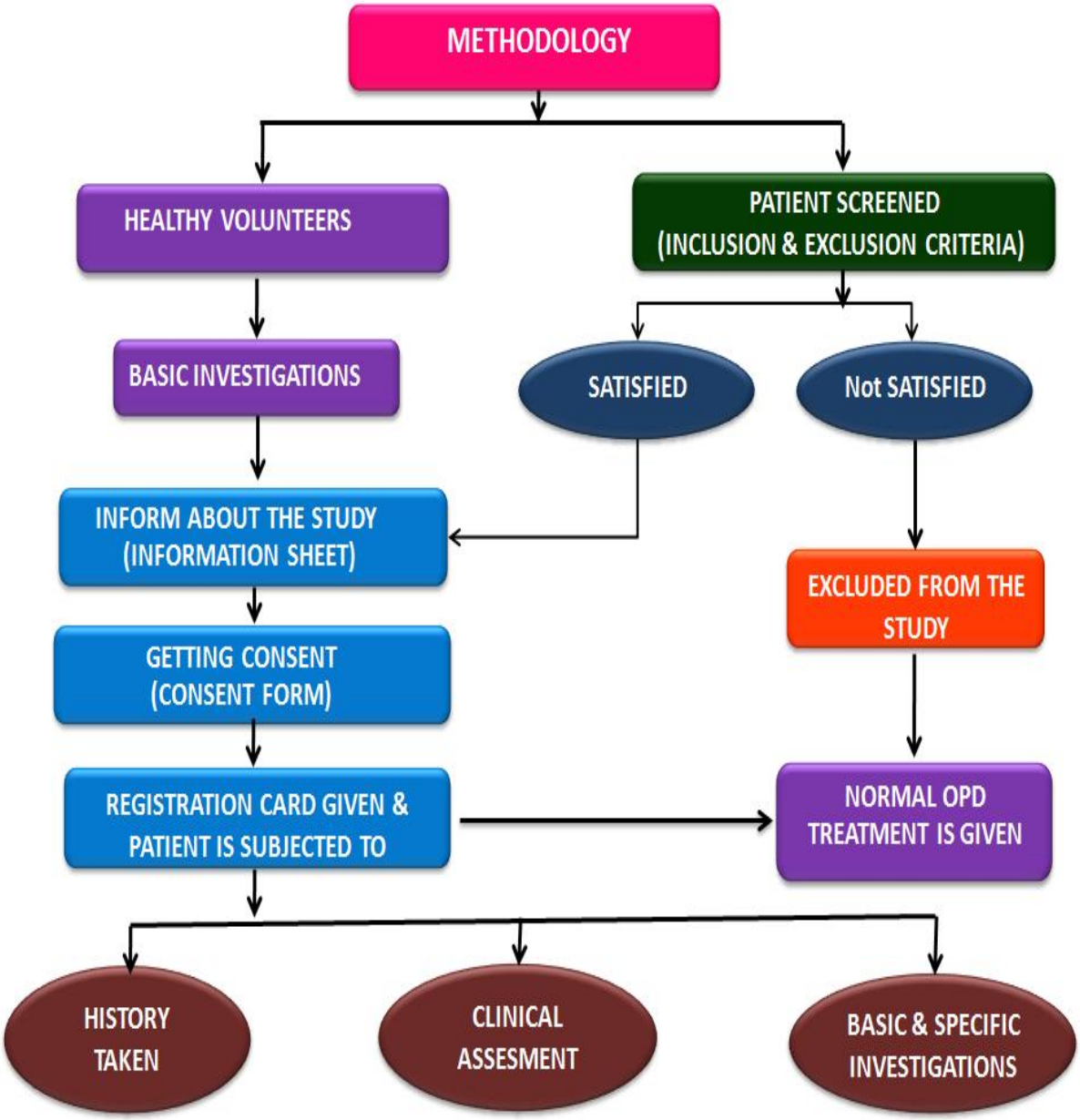
6. EXCLUSION CRITERIA

- Any Organic lesions in the intestines
- Any systemic illness
- Vulnerable group.

7. WITHDRAWAL CRITERIA

- Those who is not willing to give blood sample.
- Those who is in poor follow up

8.METHODOLOGY



8. INVESTIGATIONS

A.SIDDHA PARAMETERS

1. Eight fold examination

a.Naadi

- Naadi nithanam
- Naadi nadai

b.**Meikuri (Physical Signs)**

- Veppam
- Viyarvai
- Thodu Vali

c. Naa (Tongue)

- Maa padithal
- Niram,
- Suvai
- Vaineer Ooral
- Vedippu

d.Niram (Complexion)

- Karuppu
- Manjal
- Veluppu

e.Mozhi (Voice)

- Sama oli
- Urattha oli
- Thazhntha oli

f.Vizhi (Eyes)

- Niram
- Kanneer Vadithal
- Erichal
- Peelai Seruthal

g.Malam (Stools)

- Niram
- Sikkal
- Sirutthal
- Kalichal
- Seetham

h.Moothiram (Urine)

1.a. Neerkuri

- Niram
- Manam
- Edai
- Alavu
- Nurai
- Enjal

2.b.Neikuri

2. Manikkadai nool

3. Yakkai elakkanam

4. Astrology

B.MODERN PARAMETERS

BLOOD

- Hb
- TC
- DC
- ESR
- Blood Sugar (F&PP)
- S. Cholesterol

URINE

- Albumin
- Sugar
- Deposits

MOTION

- Ova
- Cyst
- Occult blood

C.SPECIAL INVESTIGATIONS

- SIGMOIDOSCOPY

9. DATA COLLECTION

Case Record Form

Annexure I : Screening and selection proforma

Annexure IA : History proforma

Annexure II : Clinical Assessment Form

Annexure III : Laboratory Investigations

Aannexure IV : Informed Written Consent Form

Annexure IVA: Patient Information Sheet

12.DATA MANAGEMENT

After enrolling the patient in the study, a separate file for each patient will be opened and all forms will be filed in the file. Study No. and Patient No. will be entered on the top of file for easy identification and arranged in a separate rack atthe concerned OPD unit. Whenever study patient visits OPD during the study period, the respective patient file will be taken and necessary recordings will be made at the case record form or other suitable form. The Data recordings will be monitored for completion and compliance of patients by HOD and Sr. Research Officer (Statistics). All forms will be further scrutinized in presence of Investigators by Sr. Research Officer (Statistics) for logical errors and incompleteness of data before entering onto computer to avoid any bias. No modification in the results is permitted for unbiased report.

Any missed data found in during the study, it will be collected from the patient, but the time related data will not be recorded retrospectively All collected data will be entered using MS access software onto computer. Investigators will be trained to enter the patient data and cross checked by SRO

13. STATISTICAL ANALYSIS

All collected data will be entered into computer and the neikuri shape will be recorded as per literature. The shape association with Normal healthy individuals / in patients with Mirutthu vaatham will be descriptively analyzed and presented.

The chi-square, Mantel-Hanzel chi-square, Proportion test will be used to determine the significance of a variable. Multivariate analysis – Factor analysis will also be performed to determine the factors associated with neikuri shapes. Probability less than 0.05 will be taken as significance.

14. ETHICAL ISSUE

- Patients will be examined and screened unbiased manner and will be subjected to the criteria.
- Informed consent will be obtained from the patient in writing, explaining in the understandable language to the patient.
- The data collected from the patient will be kept confidentially. The patient will be explained about the diagnosis.
- To prevent any infection, while collecting blood sample from the patient, only disposable syringes, disposable gloves, with proper sterilization of lab equipments will be used.
- This study involves only the necessary investigations (mentioned in the protocol) and No other investigation would be done.
- Normal treatment procedure followed in NIS will be prescribed to the study patients and the treatment will be provided at free of cost.
- There will be no infringement on the rights of patient.

15. GANNT CHART

Table-9

S. no	Description of Task	Months													
		1-3	4-6	7	8	9	10	11	12	13-22	13-23	24-25	26-27	28-30	31-32
1	Topic selection														
2	Collection of literature														
3	Appearing for Screening														
4	Preparation of Protocol														
5	Approval from IEC														
6	Selection of Cases														
7	Data entry														
8	Preconsolidation														
9	Analysis &interpretation														
10	Discussion &revision														
11	Submission														

11. OBSERVATION AND RESULTS

Table 11 - Age distribution

AGE DISTRIBUTION		
Age distribution	**No. of cases**	**Percentage**
20-30 yrs	12	40
31-40 yrs	08	26.6
41-50 yrs	10	33.3
Total	30	100

AGE DISTRIBUTION

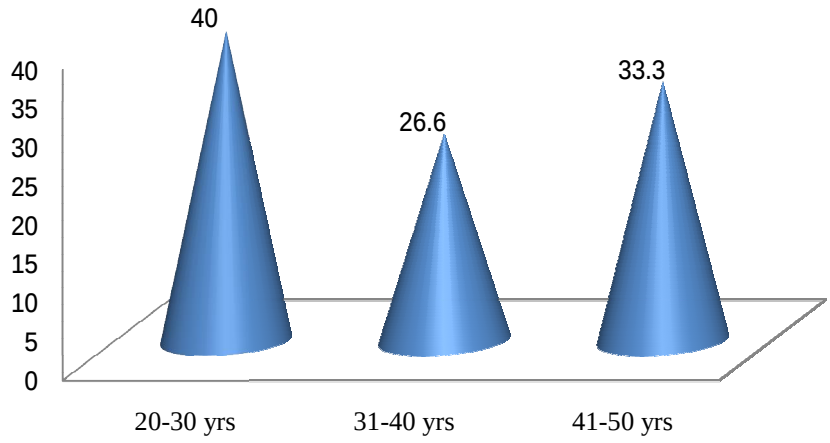


Figure 1 - Age distribution

Observation

Among 30cases 12(40%) cases were in the age group of 20-30yrs, 8(26.6%) cases were between the age group of 31-40yrs, 10(33.3%)cases were between the age group of 41-50 yrs..

Inference

In this study 40% of cases were between the age group of 20-30 yrs.

Table 12 - Sex determination

SEX DETERMINATION		
Sex determination	No.of cases	Percentage
Male	19	63.33
Female	11	36.66
Total	30	100

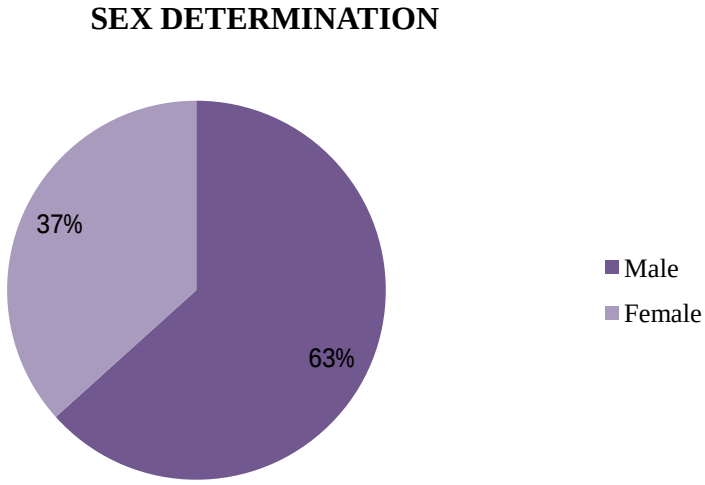


Figure 2 - Sex determination

Observation

Among 30cases 19(63%) caseswere males, 11(37%) cases were females.

Inference

In this study 63% cases were males. Incidence of mirutthu vaatham is more in males than females.

Table 13 - Food habits

FOOD HABITS		
Food habits	**No of cases**	**Percentage**
Vegetarian	2	6.66
Non vegetarian	28	93.33
Total	30	100

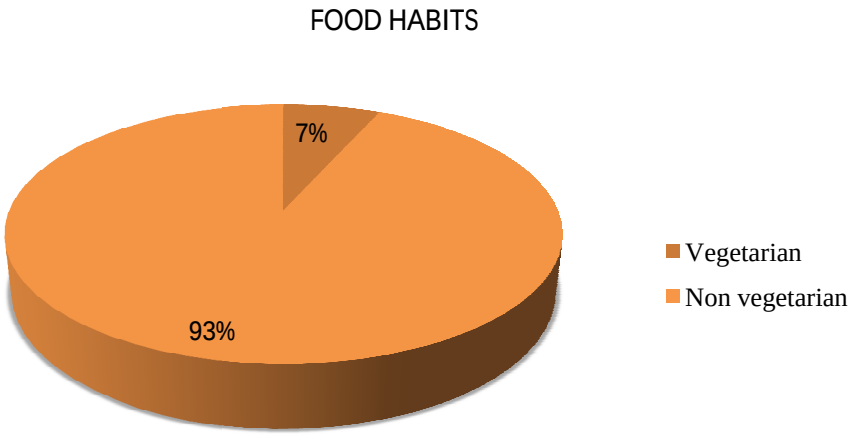


Figure 3- Food habits

Observation

Among 30 cases of 28(93%) cases were being non vegetarian and 2(6.66%) cases were being vegetarian.

Inference

Most of the cases were being nonvegetarian. Nonvegetarian diet which is considered as thamogunam food seems to alter the body, mind and soul.

Table- 14 Socio- Economic status

SOCIO - ECONOMIC STATUS		
Economic status	**No.of cases**	**Percentage**
Low Income Group	7	23.3
Middle Income Group	22	73.3
High Income Group	1	3.33
Total	30	100

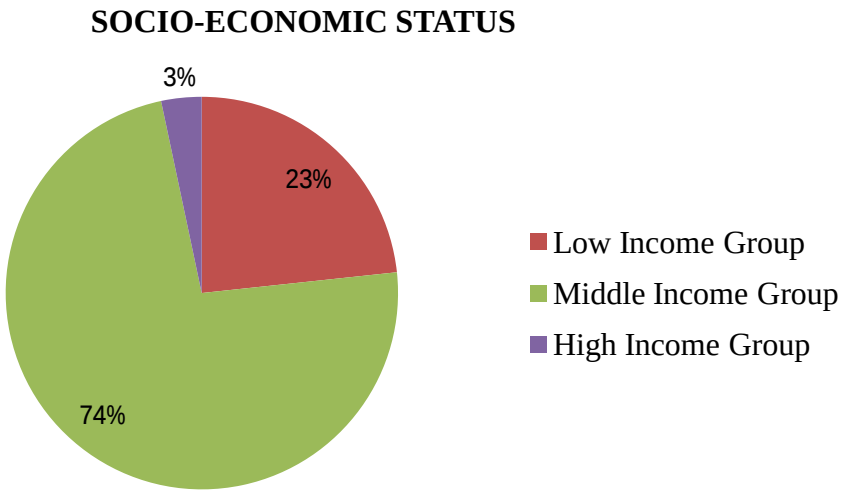


Figure 4- Socio- Economic status

Observation

Among 30cases of 7(23.3%) were low income group, 22(73.3%) were middle income group and 1(3.33%) were high income group.

Inference

In this study 73.3% cases were middle income group.The middle income group people due to their life style and habits are prone to have mirutthu vaatham.

Table-15 Etiology of Mirutthu vaatham

ETIOLOGY		
Etiology	**No of cases**	**Percentage**
Altered GIT Motility	30	100
Food habits	26	86.6
Psychological disturbance	10	33.3

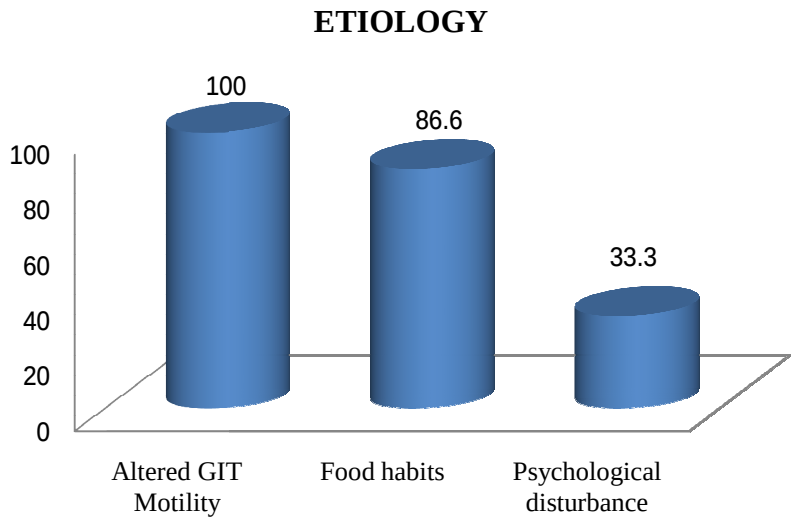


Figure 5 - Etiology

Observation

Among 30 cases 30(100%) cases were altered GIT motility, 26(86.66%) cases were food habits,10(33.33%) cases pshycological disturbance.

Inference

In this study 100% were affected by altered GIT motility.

Table -16 Clinical features

SYMPTOMS		
Symptoms	**No.of cases**	**Percentage**
Abdominal discomfort	30	100
Constipation	30	100
Diarrohea	30	100
Fatigue	30	100
Weariness of limbs	30	100
Dropsy	0	0
Fear	3	10

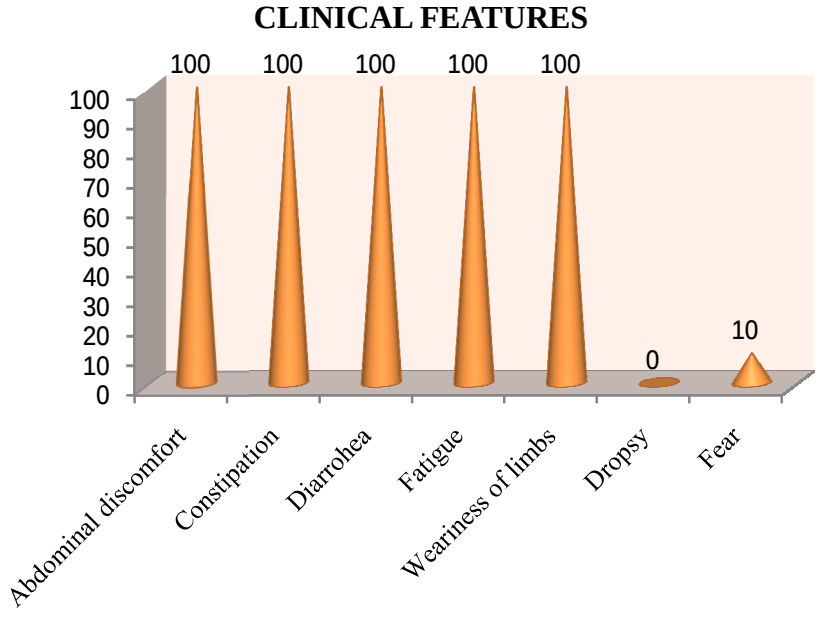


Figure 6- Clinical features

Observation

Among 30 cases, 30(100%) cases were abdominal discomfort, constipation, diarrhoea, fatigue and weariness of limbs and 3(10%)cases were fear.

Inference

In this study 100% cases had abdominal discomfort, constipation, diarrhoea, fatigue and weariness of limbs .Among all the symptoms ,the fear played the last role and no patients reported dropsy.

Table 17- Yakkai

S. no	Yakkai	Mirutthu vaatham		Healthy volunteers	
		No.of cases	Percentage	No of cases	Percentage
1	Vatham	0	0	0	0
2	Vatha Pitham	8	26.66	17	28.33
3	Vatha Kapham	1	3.33	11	18.33
4	Pitham	0	0	0	0
5	Pitha vatham	13	43.33	23	38.33
6	Pitha kapham	7	23.33	5	8.33
7	Kapham	0	0	0	0
8	Kapha vatham	0	0	2	3.33
9	Kapha pitham	1	3.33	2	3.33
	Total	30	100	60	100

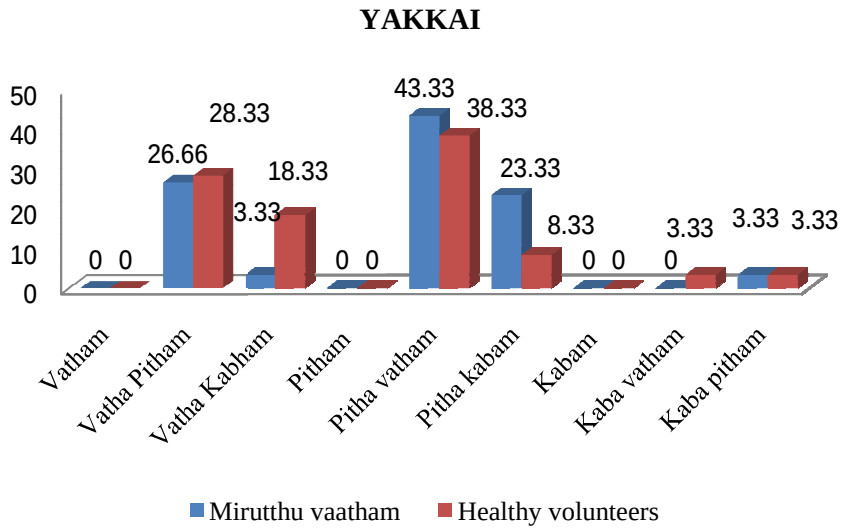


Figure 7- Yakkai

Observation

Among the 30 cases, 13(43.3%)cases were pithavatham,8(26.6%)cases were vathapitham,7(23.3%)cases were pitha vatham, each 1(3.3%)cases each were vatham kapham and kapha pitham.Yakkai in healthy volunteers 23(38.3%)cases were pitha vatham, 17(28.33%)cases were vathapitham, 11(18.3%)cases were vatha kapham, 5(8.3%)cases were pitha kapham, each 2(3.3%)cases were kaphavatham and kapha pitham.

Inference

Most of the cases and healthy volunteers were pitha vatham and vatha pitham physique.The pitha vatham and vatha pitham temperament patients are prone to have mirutthu vaatham .When compared with individual humour patients.

Table-18 Noi utra kaalam

NOI UTRA KAALAM		
Noi utra kaalam	**No.of cases**	**Percentage**
Kaarkaalam	2	6.66
Koothirkaalam	2	6.66
Munpanikaalam	4	13.33
Pinpanikaalam	8	26.66
Elavenirkaalam	9	30
Mudhuvenirkaalam	5	16.66
Total	30	100

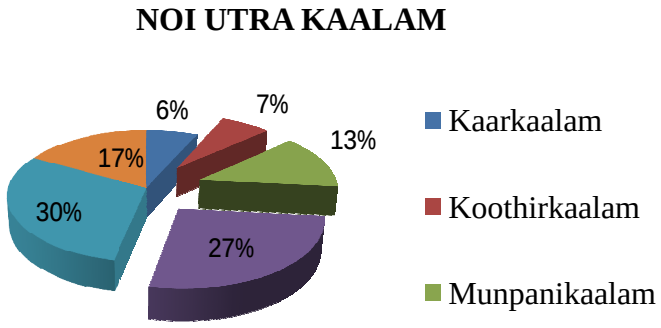


Figure 8 -Noiutra kaalam

Observation

Among 30 cases, 9(30%) cases had affected at elavenir kaalam, 8(27 %)cases had affected at pinpanikaalam, 5(17%)cases had affected at mudhuvenir kaalam,4(13%)cases affected at munpanikaalam and each 2(7%) cases had affected at kaarkaalam and koothir kaalam.

Inference

In this study 30% cases had affected at elavenir kaalam and 27 %cases had affected at pinpanikaalam. The occurance of disease is mostly during Elavenir kaalam (Chithirai,Vaigasi), in which the pitham aggrevates and causes this disease.

Table-19 Noi utra Nilam

NOI UTRA NILAM		
Noi utra Nilam	**No.of cases**	**Percentage**
Kurinji	8	26.66
Mullai	1	3.33
Marutham	3	10
Neithal	18	60
Paalai	0	0
Total	30	100

NOI UTRA NILAM

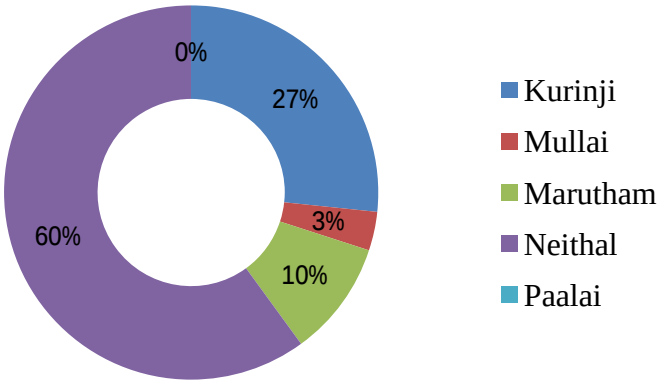


Figure – 9 Noi Utra Nilam

Observation

Among 30 cases, 18(60%)of cases had affected in neithal nilam, 8(27%) cases had affected in kurinji nilam, 3(10 %) cases had affected in marutham nilam and 1(3%) cases affected in mullai nilam.

Inference

In this study 60% cases are affected in neithal nilam.

Table -20 Gnanenthiriyangal

GNANENTHIRIYANGAL		
Gnanenthiriyangal	**No. of cases**	**Percentage**
Sevi	0	0
Mei	1	3.33
Kan	5	16.6
Naakku	0	0
Mooku	0	0

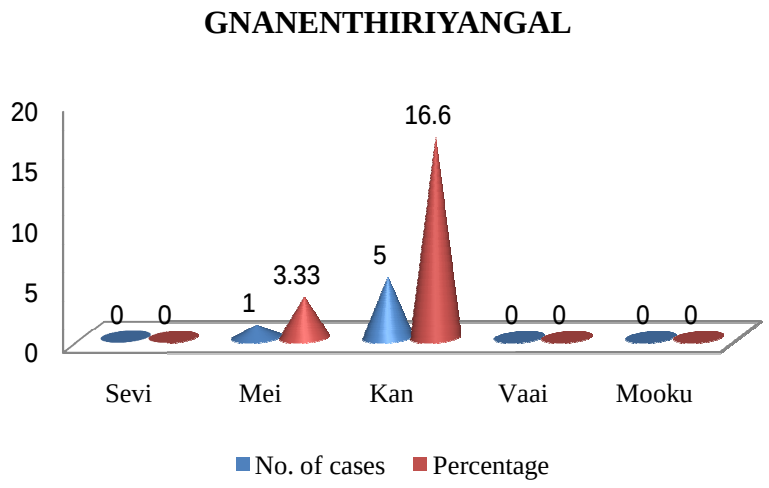


Figure 10 - Gnanenthiriyangal

Observation

Among 30 cases, 5(16.3%)cases of kan got deranged resulting in diminished vision and 1(3.3%) cases mei got deranged resulting in pimples.

Inference

In this study 16.3% cases were affected in kan .

Table-21 Kanmenthiriyangal

KANMENTHIRIYANGAL		
Kanmenthiriyangal	**No.of.cases**	**Percentage**
Vaai	0	0
Kaal	30	100
Kai	30	100
Eruvai	30	100
Karuvai	0	0

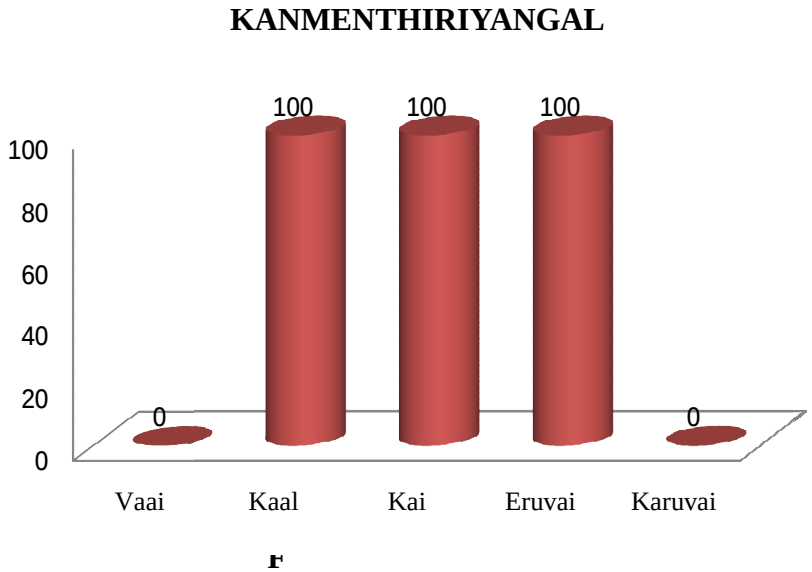


Figure 11 Kanmenthiriyangal

Observation

In Gnanenthiriyangal 30(100%)cases of Kaal,Kai got deranged resulting in weariness of limbs, 100% cases of Eruvai got deranged resulting in constipation and diarrhoea.

Inference

In this study 100% of cases were affected in kaal, kai and Eruvai.

Table -22 Kosangal

KOSANGAL		
Kosam	**No.of cases**	**Percentage**
Annamayakosam	30	100
Pranamayakosam	0	0
Manomayakosam	10	33.33
Vignanamayakosam	0	0
Aanandhamayakosam	0	0

KOSANGAL

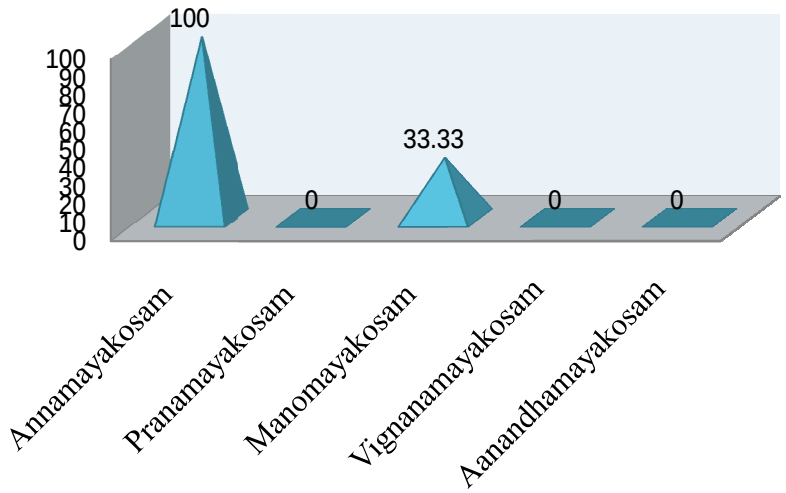


Figure 12- Kosangal

Observation

Among 30 cases, 100% cases affected Annamayakosankal got deranged resulting in constipation, 10%case affected Manomayakosam got deranged resulting in stress.

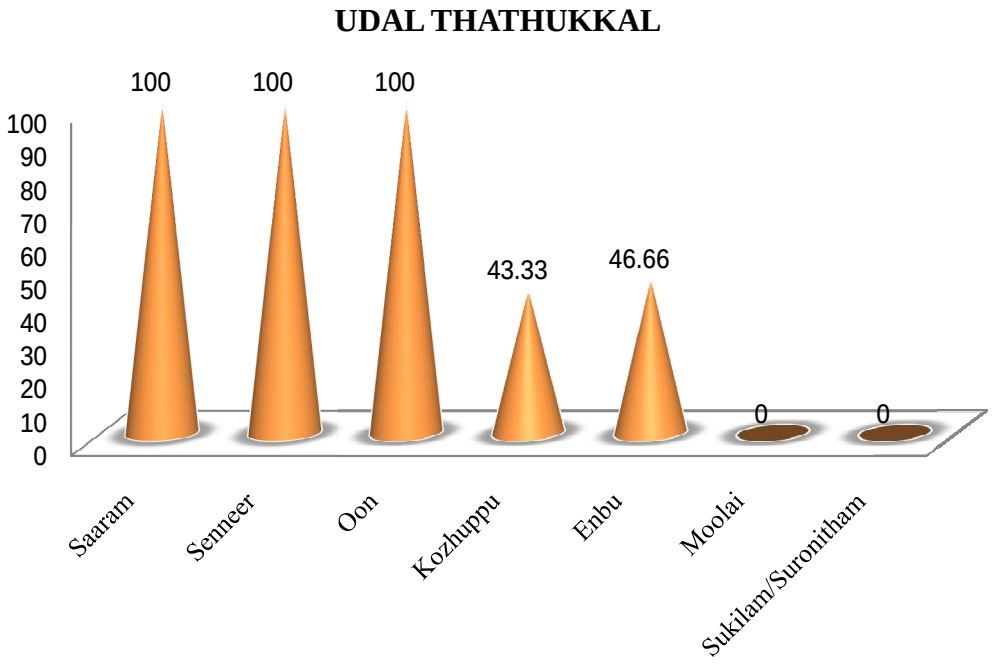
Inference

Most of the cases 100% affected by Annamaya kosangal.

Table 23 Udal thathukkal

UDAL THATHUKKAL		
Udal thathukkal	**No.of cases**	**Percentage**
Saaram	30	100
Senneer	30	100
Oon	30	100
Kozhuppu	13	43.33
Enbu	14	46.66
Moolai	0	0
Sukilam/Suronitham	0	0

Figure 13- Udal thathukkal



Observation

Among the seven somatic components of 30 cases, 30(100%) cases had affected Saaram, Senneer, Oon, 14(47%)cases had affected Enbu and 13(43%)cases had affected Kozhuppu.

.

Inference

All the cases are affected by Saaram, Senneer and Oon.

Table-24 Uyir Thathukkal-Vali

UYIR THATHUKKAL		
Vali	**No.of cases**	**Percentage**
Pranan (Uyirkkal)	4	13.3
Abanan (Keezh nokku kaal)	30	100
Samanan (Naduk kaal)	30	100
Uthanan (Melnokku kaal)	0	0
Viyanan (Paravu kaal)	30	100
Naahan	0	0
Koorman	7	23.3
Kirukaran	2	6.66
Devathathan	30	100
Dhananjeyan	0	0

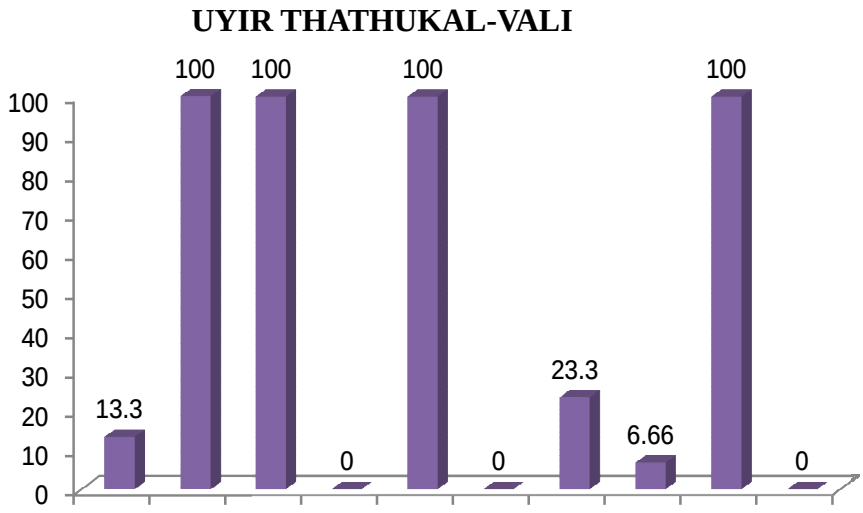


Figure 14- Uyir Thathukkal-Vali

Observation

Among 30cases of Uyir Thathukal vali,7(6%)cases had kirukaran affected, 4(13%) cases had piranan affected,7(23%) had koorman affected and all of cases had abanan, samanan, and viyanan affected.

Inference

In this study 100% cases were affected by abanan, samanan and viyanan. The abanan which is responsible for the downward movement have affected resulting in the abnormality of excretory function and viyanan due to abnormality in the abdominal movements.

Table 25– Uyir Thathukkal- Azhal

UYIR THATHUKKAL		
Azhal	**No.of cases**	**Percentage**
Analagam (Aakku anal)	4	13.33
Ranjagam (Vanna eri)	1	3.33
Saathagam (Aatral agni)	30	100
Prasagam (Ul oli thee)	1	3.33
Aalosagam (Nokku anal)	5	16.66

UYIR THATHUKKAL-AZHAL

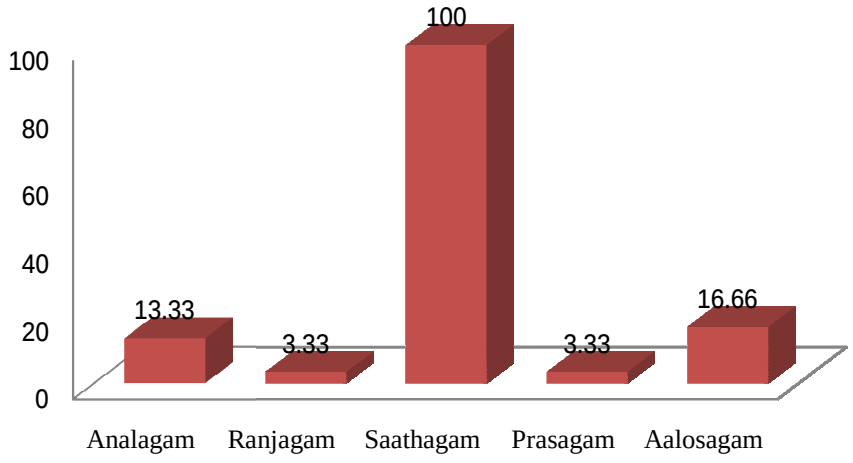


Figure15- Uyir Thathukkal-Azhal

Observation

Among 30cases 5(16.6%)cases were Aalosagam,4(13.3%)cases had affected Anarpitham,1(3.3%) cases had affected Ranjagam and Prasagam and all the cases had affected Saathaga pitham.

Inference

In this study 100% cases were Santhigam affected.

Table 26– Uyir Thathukkal- Iyyam

UYIR THATHUKKAL		
Iyyam	**No.of cases**	**Percentage**
Avalambagam (Ali iyyam)	0	0
Kilethagam (Neerpi iyyyam)	4	13.33
Pothagam (Suvai kaan iyyam)	0	0
Tharpagam (Niraivu iyyam)	1	3.33
Santhigam (Ondri iyyam)	30	100

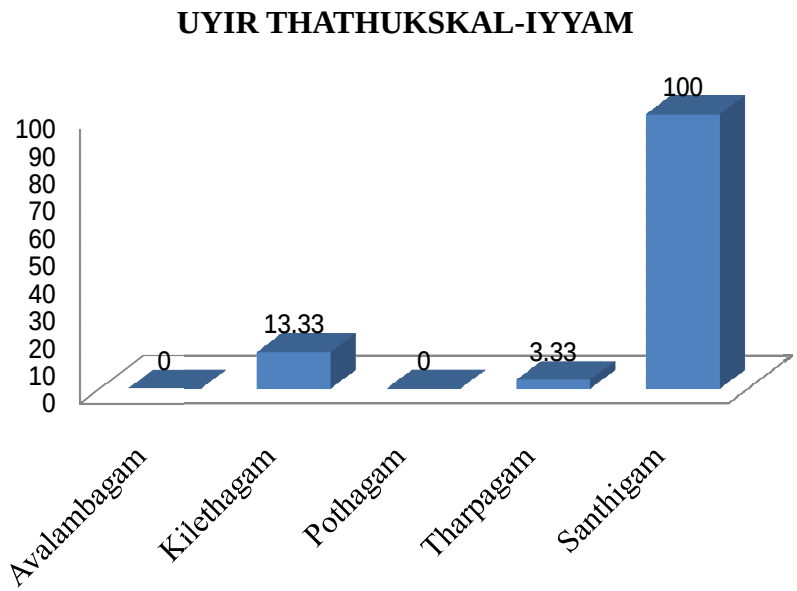


Figure 16 - Uyir Thathukkal- Iyyam

Observation

In Iyyam 30cases ,1(3.3%)cases were affected in Tharpagam, 4(13.3%) cases were affected in Kilethagam and all the cases 100% affected by Santhigam.

Inference

In Iyyam majority of the cases are affected by Santhigam.

Table -27 Envagaithervugal Naa

Naa		Mirutthu vaatham		No.of. Healthy volunteers	Percentage
		No.of cases	Percentage		
Thanmai	Maapadithal	12	40	17	28.33
	Vedippu	-	0	2	3.33
	Iyalbu	18	60	41	68.33
	Total	**30**	**100**	**60**	**100**
Niram	Karuppu	5	16.66	10	16.66
	Manjal	0	0	0	0
	Veluppu	1	3.33	7	11.66
	Iyalbu	24	80	43	71.66
	Total	**30**	**100**	**60**	**100**
Suvai	Kaippu	2	6.66	07	11.66
	Pulippu	12	40	16	26.66
	Inippu	16	53.33	37	61.66
	Total	**30**	**100**	**60**	**100**
Vaineerooral	Kuraivu	-	0	-	0
	Iyalbu	30	100	60	100
	Total	**30**	**100**	**60**	**100**

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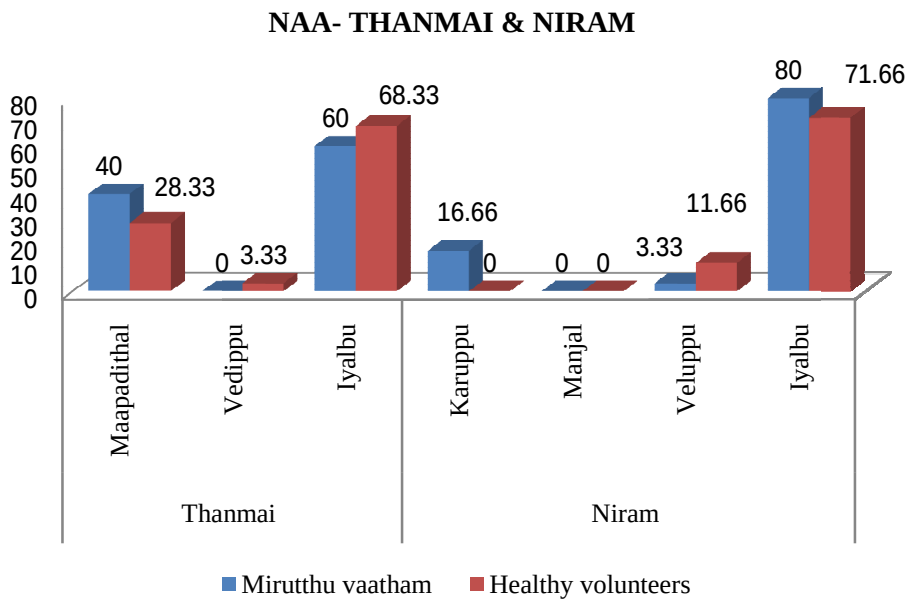

Figure 17-Naa-Thanmai&Niram

Observation

Among 30cases 5(16.6%) cases had black pigmented tongue, 1(3.33)cases had pallor tongue and 24 (80%) cases normal colour of the tongue. Among 30 cases,12(40%) cases had coated tongue,18(60%) cases had normal tongue.

In healthy volunteers 43(71.6%) had normal tongue.10(16.6%)cases had black pigmented tongue and 7(11.6%) cases had pallor tongue. 41(68.3%)cases had normal tongue,2(3.3%) cases had fissured tongue and 17(28.3%) cases had coated tongue.

Inference

The colour of the tongue were normal in 80% cases and 71.6%healthy volunteers. In 40% cases had coated tongue and 60% were normal tongue.

NAA- SUVAI & VAAINEERORAL

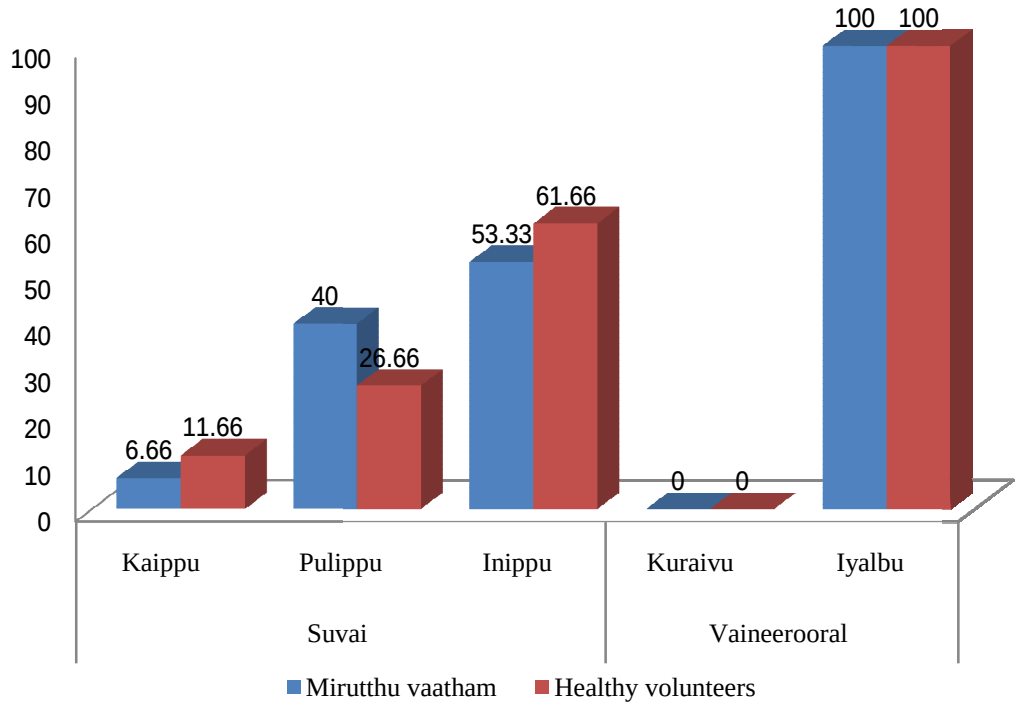

Figure 18 Naa- Suvai & Vaaineeroral

Observation

In 30 cases 2 (6.6%) were bitter taste, 12 (40%) were sour taste, and 16 (53.3%) were sweet taste. 30(100%)cases were normal salivation condition. In healthy volunteers7 (11.6%) were bitter taste,16 (26.6%)cases were sour taste, 37 (61.6%)cases had sweet taste on their tongue.In healthy volunteers 100% had normal salivation.

Inference

Majority of cases 53% and 61.6% healthy volunteers were sweet taste in tongue.100% of cases and healthy volunteers were normal salivation.

Table 28- Niram, Mozhi and Vizhi

Niram, Mozhi and Vizhi		Mirutthu vaatham		No.of. Healthy volunteers	Percentage
		No.of. cases	Percentage		
Niram	Karuppu	21	70	39	65
	Manjal	7	23.33	15	25
	Veluppu	2	6.66	6	10
	Total	**30**	**100**	**60**	**100**
Mozhi	Sama oli	28	93.33	53	88.33
	Urattha oli	2	6.66	6	10
	Thazhntha oli	0	0	1	1.66
	Total	**30**	100	60	**100**
Vizhiyin Niram	Karuppu	0	0	0	0
	Manjal	0	**0**	**0**	0
	Sivappu	2	6.66	5	8.33
	Veluppu	1	3.33	7	11.66
	Iyalbu	27	90	48	80
	Total	**30**	**100**	**60**	**100**
Vizhiyin Thanmai	Kanneer	0	0	6	10
	Kan Erichchal	2	6.66	10	16.66
	Peelai seruthal	2	6.66	4	6.66
	Iyalbu	26	86.66	40	66.66
	Total	**30**	**100**	**60**	**100**

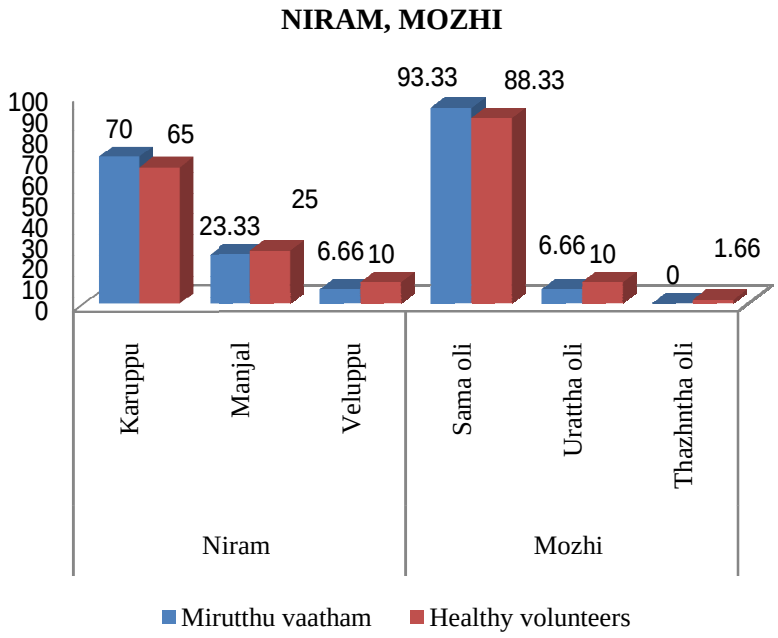

Figure 19-Niram, Mozhi

Observation

In 30 cases 21(70%) cases were black colour appearance,.7(23.3%) cases were yellow colour appearance and 2(6.6%) cases were veluppu color appearance. And 28(93.3%) cases have sama oli.2(6.6%) cases are urattha oli

In healthy volunteers 39(65%) were black colour appearance,15(25%) cases were yellow colour appearance,6(10%) were veluppu colour appearance. And 53(88.3%)cases were samaoli, 6(10%) cases were urattha oli,1(1.6%) cases were thazhntha oli.

Inference

A majority of patients and healthy volunteers reported with black colour complexion and normal voice pitch.

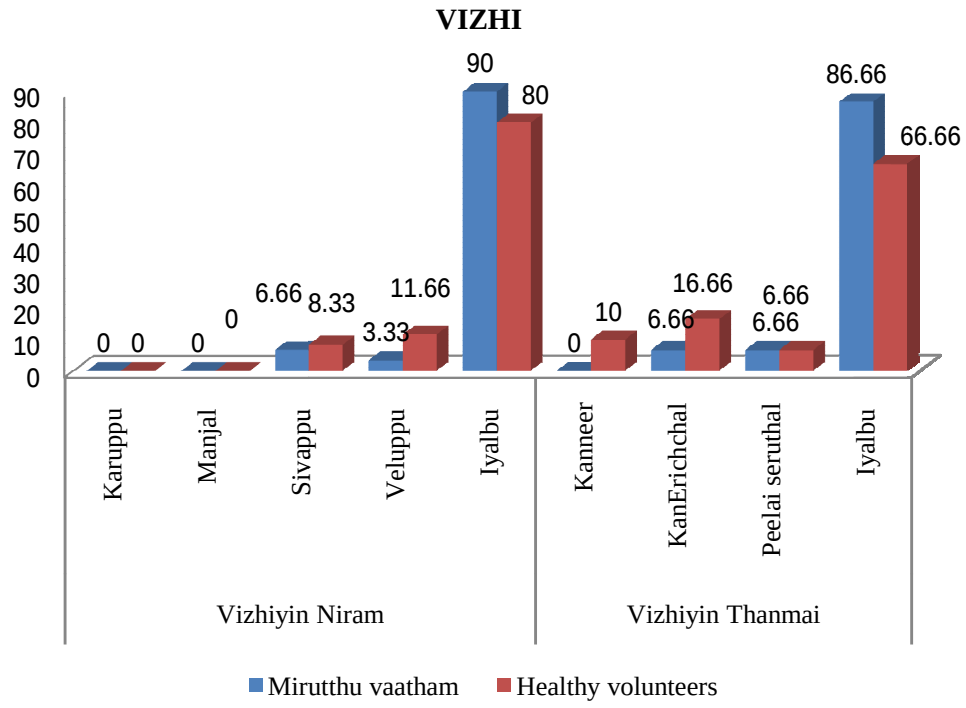

Figure 20- vizhi

Observation

Among 30 Cases, 27(90%) cases had normal vizhiyin niram.1(3.33%)cases veluppu colour present,2(6.665) cases sivappu in venviliyin niram, Each 2(6.66%) were Kan erichal,Peelai seruthal, 26(86.6%) cases were normal in vizhiyin thanmai.In healthy volunteers 7(11.6%) cases having veluppu colour present,5 (8.33%) cases having sivappu colour present and 48(80%) cases were normal venvizhiyin niram. 10(16.6%) cases are having increased kanerichal 4(6.66%) were peelai seruthal condition.40(66.6%) cases normal in vizhiyin thanmai.

Inferance:

Majority of patients and healthy volunteers in the study had seen with normal eyes. No specific inference could be made from vizhi examination.

Table 29-Naadi

NAADI		Mirutthu vaatham		Healthy volunteers	
		No.of cases	**Percentage**	**No.of cases**	**Percentage**
Naadi nithanam (Pulse Appraisal)	Vanmai	23	76.6	47	78.33
	Menmai	7	23.3	13	21.66
	Total	**30**	**100**	**60**	**100**
Naadi Panbu (Pulse character)	Thannadai	30	100	60	100
	Ilaithal	0	0	0	0
	Kuthithal	0	0	0	0
	Thullal	0	0	0	0
	Total	**30**	**100**	**60**	**100**
Naadi Nadai (Pulse play)	Vatha pitham	13	43.33	26	43.33
	Vatha kabam	1	3.33	4	6.66
	Pitha vatham	12	40	20	33.33
	Pitha kapham	4	13.33	8	13.33
	Kapha vatham	0	0	2	3.33
	Kapha pitham	0	0	0	0
	Total	**30**	**100**	**60**	**100**

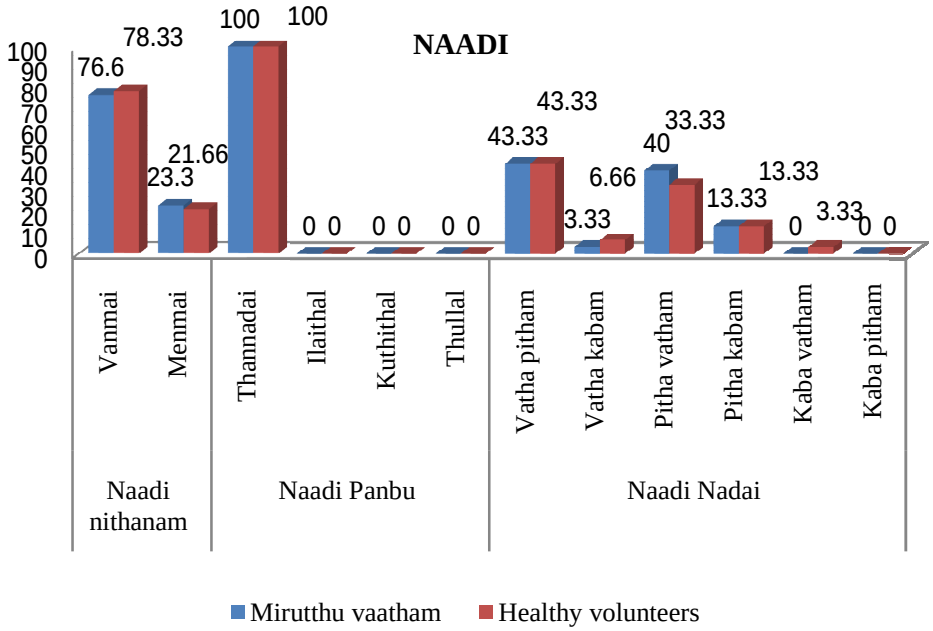

Figure21 -Naadi

Observation

Among 30 cases, 23(76.6%) cases were vanmai and 7(23.3%) menmai in Naadi nithanam,all the cases were thannadai in naadi panbu,13(43.3%) cases were vatha pitham,12(40%) cases were pitha vatham,4(13.3%) cases were pitha kapham,1(3.3%) cases were vatha kapham.

In healthy volunteers 47(78.3%) were vanmai ,and 13(21.6%) cases were menmai in Naadi nithanam and all the cases are thannadai in naadi panbu, . 26(43.3%)cases were vathapitham,20(33.3%) cases were pitha vatham,8(13.3%) cases were pitha kapham,2(3.3%) cases were kapha vatham.

Inferance

Most of the cases and healthy volunteers have vanmai in naadi nithanam, thannadai in naadi panbu, vatha thontha naadi in naadi nadai.

Table -30 Sparisam

Mei kuri		**Mirutthu vaatham No.of cases**	**Percentage**	**No.of Healthy volunteers**	**Percentage**
Veppam	Mitham	22	73.33	42	70
	Migu	1	3.33	7	11.66
	Thatpam	7	23.33	11	18.33
	Total	**30**	**100**	**60**	**100**
Viyarvai	Iyalbu	20	66.66	45	75
	Athigam	10	33.33	15	25
	Total	**30**	**100**	**60**	**100**
Thanmai	Thodu vali	22	73.33	0	0
	Udal varatchi	0	0	3	5
	Iyalbu	8	26.66	57	95
	Total	**30**	**100**	**60**	**100**

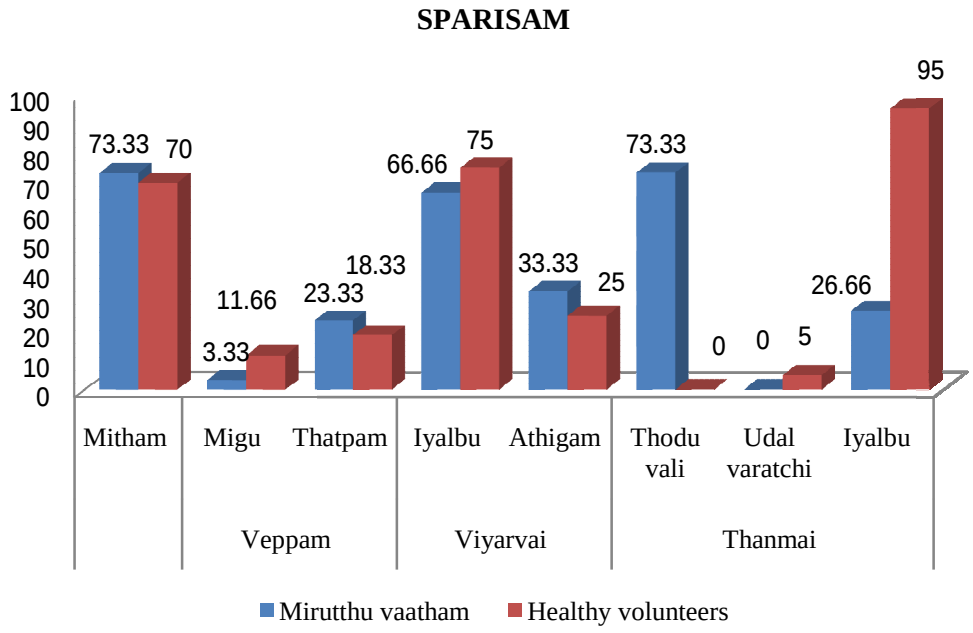

Figure 21- Sparisam

Observation

Among 30 Cases, 22(73.3%) cases are having mitha veppam in sparisam condition, 1(3.3%) cases are having migu veppam in sparisam condition, 7(23.3%) are having thatpam in sparisam condition. And sweating condition 20(66.6%) cases are normal,10 (33.3%) cases are increased condition. Thoduvali thanmai,22(73.3%) cases present. No one have udal varatchi.

In healthy volunteers 42(70%) peoples are having mithaveppam,7 (11.6%)%) peoples are having migu veppam in sparisam condition, 11(18.3%) peoples are having thatpam in sparisam condition. And sweating condition 45(75%) peoples are normal, 15(25%) of people are increased in condition.3(5%) people have udal varatchi.

Inference

Majority of cases, 73.3% are having mitha veppam in sparisam condition, 7% cases are having thatpam in sparisam condition and 73.3% of cases present in Thoduvali thanmai.

Table 31- Malam

Malam		Mirutthu vaathamNo .of cases	Percentage	No.of Healthy volunteers	Percentage
Niram	Karuppu	0	0	0	0
	Manjal	30	100	60	100
	Total	**30**	**100**	**60**	**100**
Thanmai	Mala Sikkal	30	100	13	21.66
	Sirutthal	24	80	13	21.66
	Kalichchal	30	100	2	3.33
	Seetham	14	46.6	0	0
	Vemmai	10	33.3	0	0
	Habitual constipation	30	100	13	21.66
	Mucus	14	46.66	0	0
	Blood	0	0	0	0

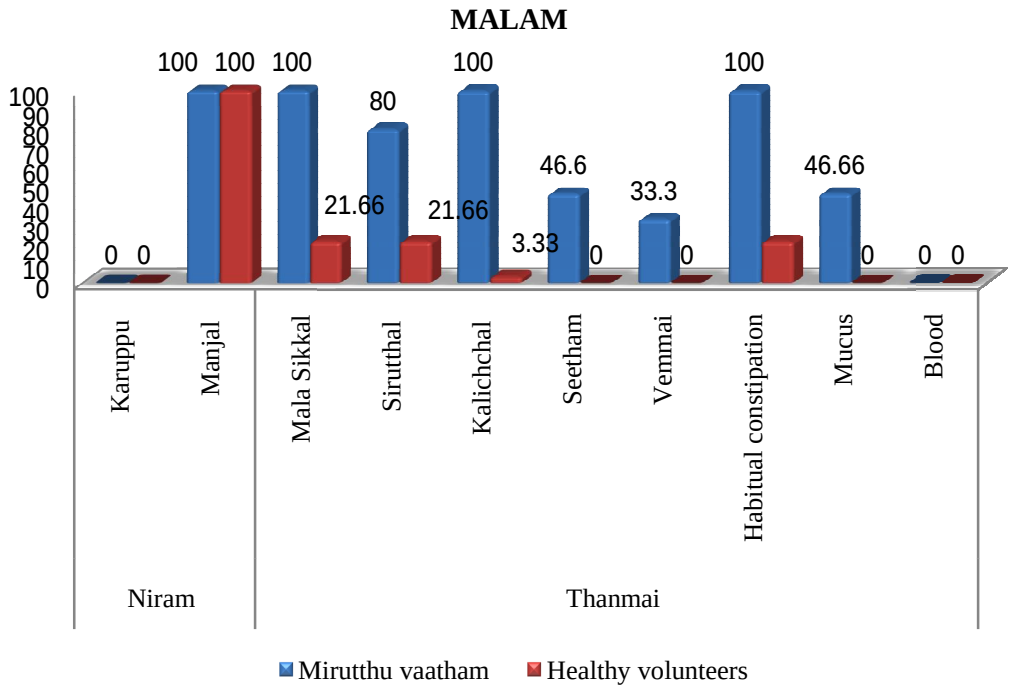

Figure 22- Malam

Observation

Among 30cases, 30 (100%) cases were manjal color,30(100%) cases had sikkal,kalichchal and habitual constipation,24 (80%) cases were sirutthal and 14(46.6%)cases were seetham present,10(33.3%)cases have venmai present.

In healthy volunteers,30 (100%) were manjal color,13(21.6%) had siruthal and sikkal and habitual constipation,2(3.3%)cases had kalichchal,75% had normal bowel habits.

Inference

In the study majority of patients and healthy volunteers had normal colored stools. 100% had sikkal, kalichchal, habitual constipation. In healthy volunteers 21.6% had sikkal and siruthal.

Table 32-Moothiram

Neer kuri		Mirutthu vaatham		No.of healthy volunteer	Percentage
		No.of cases	**Percentage**		
Neer Thanmai	Neer Manam(Ammonical)	30	100	60	100
	Fruity	0	0	0	0
	Total	**30**	**100**	60	100
Neer Niram	Yellow	15	50	23	38.33
	Pale yellow	7	23.33	25	41.66
	Colourless	8	26.66	12	20
	Total	**30**	**100**	**60**	**100**
Nurai	Absent	20	66.66	40	66.66
	Present	10	33.33	20	33.33
	Total	**30**	**100**	**60**	**100**
Edai	Iyalbu	30	100	60	100
	Total	**30**	**100**	**60**	**100**
Enjal	Iyalbu	30	100	57	95
	Athigam	0	0	3	5
	Total	**30**	**100**	**60**	**100**
Nei kuri	Aravam	0	0	0	0
	Muthu	8	26.66	25	41.66
	Irregular	2	6.66	7	11.66
	Sieve pattern	9	30	13	21.66
	Mellena paraval	11	36.66	15	25
	Total	**30**	**100**	**60**	**100**

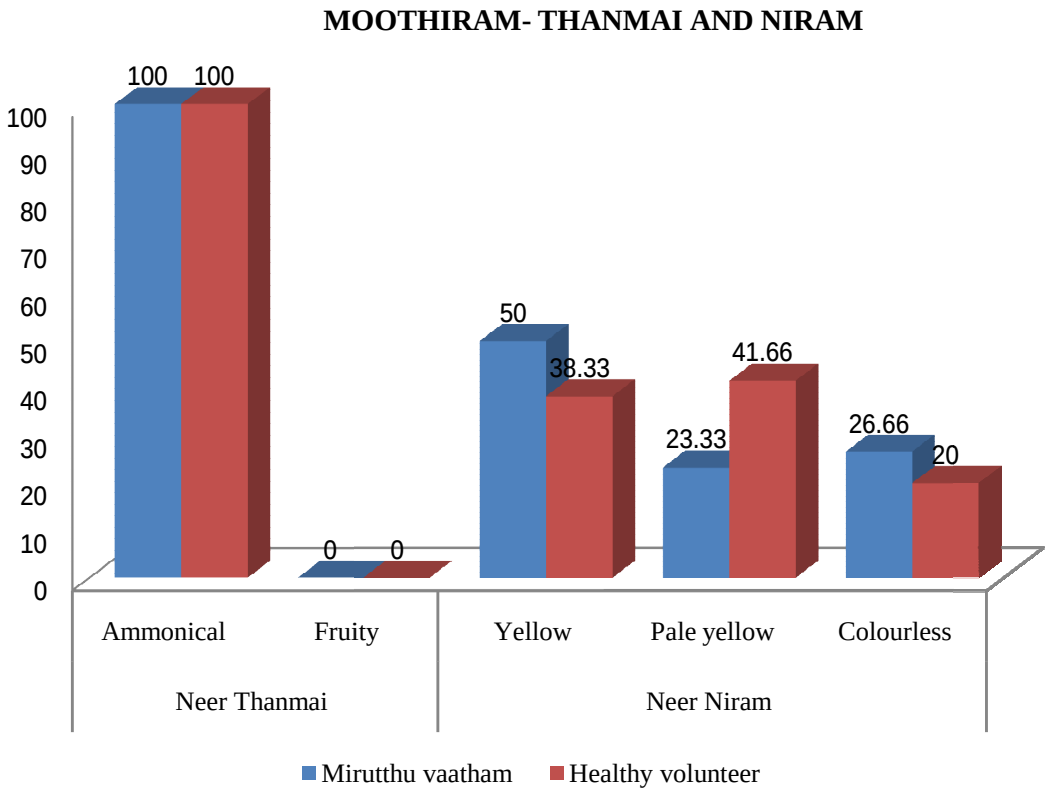

Figure23- Moothiram- Thanmai and Niram

Observation

Among 30 cases, 30(100%) cases had mild aromatic in neer manam . 15(50%) of cases had yellow color in urine, 7(23.3%) of cases had Pale yellow color in urine,8 (26.6%) cases had colourless in nature. In healthy volunteers all cases are mild aromatic in neer manam. 23 (38.33%) yellow color in urine, 25(41.6%) cases had Pale yellow color in urine,12(20%) cases were colourless in urine.

Inference

Majority of cases had yellow colour urine. In healthy volunteers 41.6% had pale yellow colour urine. Almost all the cases and patients had mild aromatic smell.

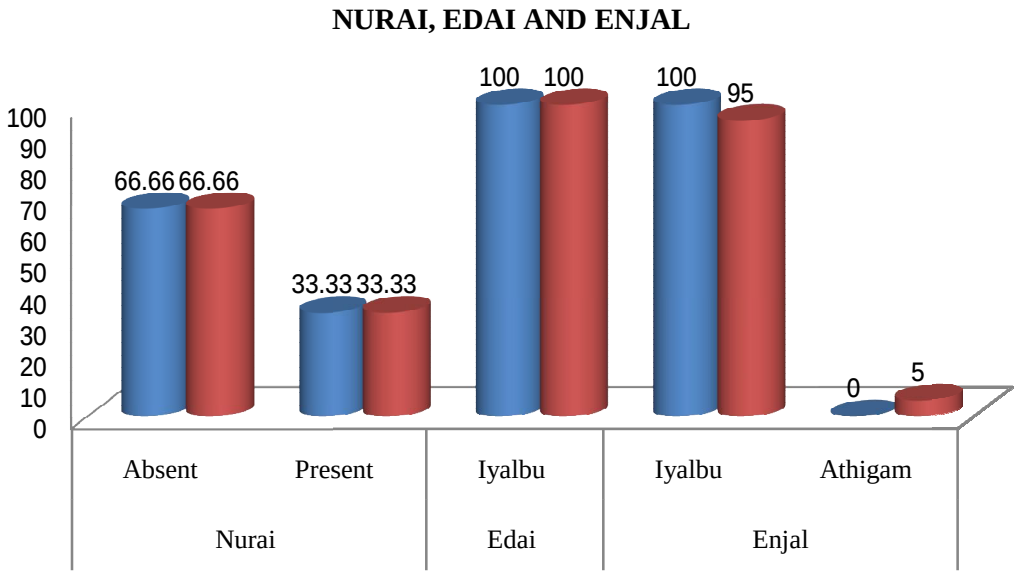

Figure24- Moothiram- Nurai, Edai and Enjal

Observation

Among 30 cases, 10(33.3%) of cases had frothy urine, and 20(66.6%)of cases had absent of frothy in urine. All of cases had normal deposits. In healthy volunteers 20(33.3%)of had frothy urine and 40(66.6%) people of had absent in frothy in urine. All of cases had normal deposits.

Inference

Majority of cases and healthy volunteers had normal deposit, normal density and absence of frothy in urine.

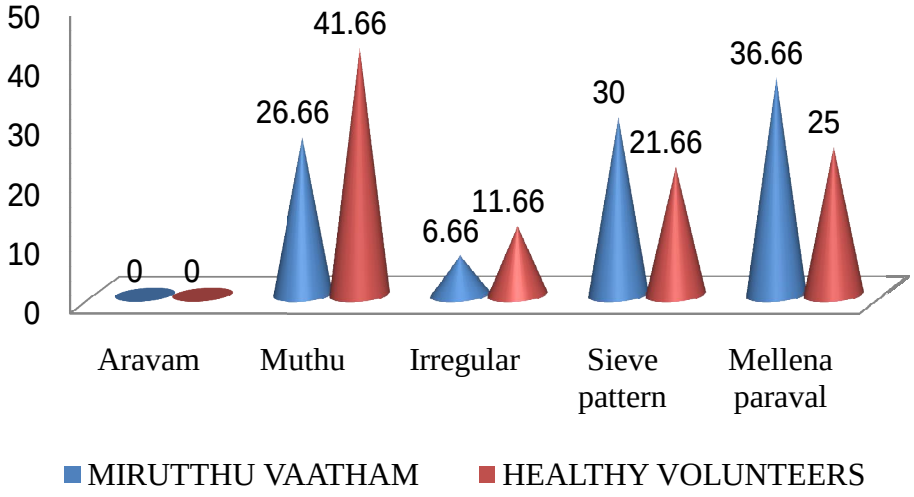

Figure 25-Neikuri

Observation

Among 30 cases, 2 (6.66%)cases had irregular spread, 8(26.66%)cases had muthu spread, 9(30%)cases had sieve spread and 11(36.6%) cases had mellena paraval (Round shape) spread. In healthy volunteers 7(11.6%)cases had irregular spread, 13(21.66%)cases had sieve spread, 15(25%)cases had mellena paraval(round shape) spread and 25(41.6%) cases had muthu spread.

Inference

Majority of the cases 36.6% were mellena paraval (round shape) in neikuri. Majority of healthy volunteers 41.6% had muthu shape in neikuri.

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Table 33- Manikadai nool

Manikadai nool (virarkadai)	Mirutthu vaatham		No.of. Health volunteers	Percentage
	No.of. cases	Percentage		
8	2	6.66	0	0
8 ¼	4	13.33	1	1.66
8½	1	3.33	13	21.66
8 ¾	4	13.33	7	11.66
9	7	23.33	9	15
9 ¼	6	20	5	8.33
9 ½	2	6.66	10	16.66
9 ¾	2	6.66	8	13.33
10	1	3.33	5	8.33
11	0	0	2	3.33
Total	**15**	**100**	**60**	**100**

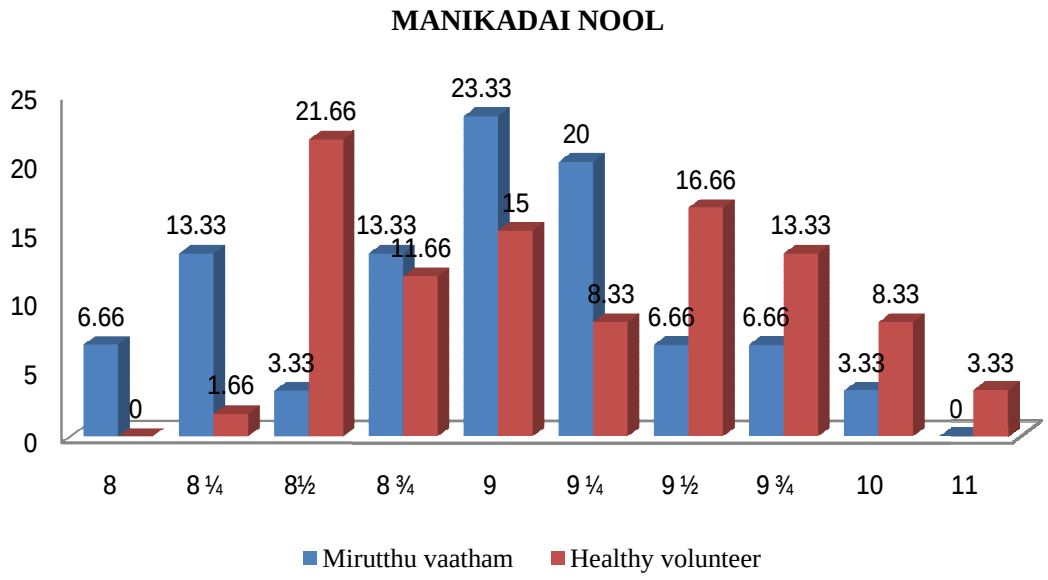


Figure 26- Manikadai nool

Observation

Among 30 cases 13.3% of cases were 81/4 finger breadth,3.3%cases 81/2 &10 finger breadth,13.3% cases 83/4 finger breadth, 23.3% was 9finger breadth, 20% cases were 91/4 finger breadth, 6.6% 0f cases 8,9 ½ &9 ¾ finger breadth.

In healthy volunteers,1.6% were 81/4 finger breadth, 21.6% cases 81/2 finger breadth, 11.6% 83/4 finger breadth, 15% was 9finger breadth, 8.3% was91/4 &10finger breadth,16.6% was 9 ½ finger breadth,13.3% was 9 ¾ finger breadth,3.3% was 11 finger breadth.

Inference

Majority of the 7 cases were 9 viralkadai at manikadainool. As per siddha text, no indication for Mirutthu vaatham.Therefore the patients with the range of 9-91/4 wrist circumetric finger breadth may be referred to have a predilection to develop Mirutthu vaatham.Such people may be advised to follow the precautionary steps to avoid the development of Mirutthu vaatham as a preventive measure.

Table - 34 Showing Laboratory Investigation of Mirutthu vaatham

S. no	Op.no	Age/Sex	Hb	TC	DC			ESR		Blood sugar		T.Bilirubin	Lipid profile					Renal function test	
					P	L	M	½ hr	1hr	F	PP		T.chol	HDL	LDL	VLDL	TGL	Urea	Sr.Cr
1	H31066	21/M	16.2	6100	56	36	8	2	4	95	109	0.5	139	47	74	18	88	19	1.1
2	F039405	44/F	13	10,000	70	28	2	20	46	96	84	0.7	210	52	126	47	234	16	0.9
3	I15319	43/M	12.4	9,800	61	35	4	10	24	102	111	0.4	181	62	107	24	118	15	0.9
4	I00031	26/M	12.7	7,600	55	40	5	2	10	97	104	0.5	181	55	108	26	150	14	0.8
5	H74306	41/M	8.8	4,900	68	25	1	20	42	97	82	0.3	192	54	98	18	90	22	1
6	I42074	50/M	11.3	8,500	70	26	4	20	44	97	134	0.5	187	48	107	39	198	15	0.8
7	I507191	25/M	14.9	10,700	60	33	7	8	16	67	86	0.6	169	47	109	41	203	14	1.1
8	F00390	43/F	12.1	6,900	58	36	6	14	30	71	95	0.7	208	61	120	30	161	15	0.7
9	I62260	37/M	13	6,800	57	34	9	16	32	92	118	0.4	157	52	94	13	66	17	0.8
10	I55001	50/F	12.7	7,400	69	27	4	4	8	73	84	0.4	167	53	97	23	113	14	0.9
11	I67254	31/M	15.8	7,900	50	42	5	14	28	110	108	0.5	197	50	122	62	311	11	1
12	I56387	45/M	14.9	6,700	64	31	6	12	12	109	167	0.8	177	56	106	19	98	23	1.2
13	I77456	23/M	9	8,200	65	30	6	12	24	115	223	0.6	150	56	82	19	99	15	0.8
14	I78579	26/M	16.3	6,100	60	30	10	2	4	87	118	0.7	141	42	77	29	145	14	1.2
15	I82873	45/M	13	7,500	63	31	6	4	10	94	91	0.4	113	69	52	13	64	19	1.2

Table - 35 Showing Laboratory Investigation of Mirutthu vaatham

S. no	Op.no	Age/ sex	Urine			Deposits		Motion		
			Albumin	Sug (F)	Sug (PP)	Pus cells	Epi Cells	Ova	Cyst	Occult blood
1	H31066	21/M	Nil	Nil	Nil	01-Mar	01-Feb	Nil	Nil	Nil
2	F039405	44/F	Nil	Nil	Nil	04-Jun	01-Mar	Nil	Nil	Nil
3	I15319	43/F	Nil	Nil	Nil	01-Mar	02-Apr	Nil	Nil	Nil
4	I00031	26/M	Nil	Nil	Nil	02-Apr	02-Apr	Nil	Nil	Nil
5	H74306	41/M	Nil	Nil	Nil	02-Apr	02-Apr	Nil	Nil	Nil
6	I42094	50/M	Nil	Nil	Nil	02-Mar	02-Apr	Nil	Nil	Nil
7	I50191	25/M	Nil	Nil	Nil	04-Jun	04-Jun	Nil	Nil	Nil
8	F00390	43/F	Nil	Nil	Nil	03-May	02-Apr	Nil	Nil	Nil
9	I62260	37/M	Nil	Nil	Nil	03-May	02-Apr	Nil	Nil	Nil
10	I55001	50/F	Nil	Nil	Nil	06-Aug	plenty	Nil	Nil	Nil
11	I67254	31/M	Nil	Nil	Nil	02-Mar	01-Feb	Nil	Nil	Nil
12	I56387	45/M	Nil	Nil	Nil	03-May	02-Apr	Nil	Nil	Nil
13	I77456	23/M	Nil	Nil	Nil	01-Feb	02-Apr	Nil	Nil	Nil
14	I78579	26/M	Nil	Nil	Nil	02-Apr	01-Feb	Nil	Nil	Nil
15	I82873	45/M	Nil	Nil	Nil	01-Feb	04-May	Nil	Nil	Nil

Table - 36 Showing Laboratory Investigation of Mirutthu vaatham

S. no	Op.no	Age/Sex	Hb	TC	DC			ESR		Blood sugar		T.Bilirubin	Lipid profile					Renal function test	
					P	L	M	½ hr	1hr	F	PP		T.chol	HDL	LDL	VLDL	TGL	Urea	Sr.Cr
16	I23403	26/F	14.1	9000	50	43	7	8	16	100	92	0.5	189	59	108	23	116	10	0.8
17	I46164	33/F	13	10,000	70	28	2	20	46	96	84	0.7	210	52	126	47	234	16	0.9
18	I75121	46/M	12.4	9,800	61	35	4	10	24	102	111	0.4	181	62	107	24	118	15	0.9
19	I79069	47/F	12.2	11,400	65	25	6	34	70	93	104	0.5	183	66	95	14	73	14	0.8
20	H87485	39/F	12.3	7,400	50	44	6	48	96	95	139	0.3	163	47	99	18	93	17	0.9
21	I66881	36/F	11.3	8,500	70	26	4	20	44	97	134	0.5	187	48	107	39	198	15	0.8
22	I53145	30/M	14.9	10,700	60	33	7	8	16	67	86	0.6	169	47	109	41	203	14	1.1
23	I96459	28/F	11.3	6,300	50	42	8	14	32	107	105	0.7	159	57	97	18	93	14	0.8
24	I90761	30/F	13	6,800	57	34	9	16	32	98	107	0.3	175	67	112	12	138	18	1.1
25	I09258	29/F	12.5	7,400	69	27	4	4	8	92	116	0.4	165	54	105	26	133	17	1.1
26	J13403	33/M	15.8	7,900	50	42	5	14	28	110	108	0.5	197	50	122	62	311	11	1
27	I89781	40/M	15.9	7,600	57	37	6	12	24	84	85	0.8	153	58	92	26	133	13	1.1
28	H29460	40/M	16.2	6,800	58	39	3	4	8	94	113	0.6	198	42	119	57	282	20	1.2
29	J18854	25/F	8.5	5,100	60	30	10	2	4	87	118	0.7	141	42	77	29	145	14	1.2
30	J18916	26/M	13	7,500	63	31	6	4	10	94	91	0.4	113	69	52	13	64	19	1.2

Table - 37 Showing Laboratory Investigation of Mirutthu vaatham

S. no	Op.no	Age/ sex	Urine			Deposits		Motion		
			Albumin	Sug (F)	Sug (PP)	Pus cells	Epi cells	Ova	Cyst	Occult blood
16	I23403	26/F	Nil	Nil	Nil	01-Mar	01-Feb	Nil	Nil	Nil
17	I46164	33/F	Nil	Nil	Nil	01-Feb	01-Feb	Nil	Nil	Nil
18	I75121	46/M	Nil	Nil	Nil	01-Mar	02-Apr	Nil	Nil	Nil
19	I79069	47/F	Nil	Nil	Nil	02-Apr	06-Jul	Nil	Nil	Nil
20	H87485	39/F	Nil	Nil	Nil	03-May	04-May	Nil	Nil	Nil
21	I66881	36/F	Nil	Nil	Nil	02-Mar	02-Apr	Nil	Nil	Nil
22	I53145	30/M	Nil	Nil	Nil	01-Feb	01-Feb	Nil	Nil	Nil
23	I96459	28/F	Nil	Nil	Nil	02-Apr	01-Feb	Nil	Nil	Nil
24	I90761	30/F	Nil	Nil	Nil	02-Apr	01-Feb	Nil	Nil	Nil
25	J09258	29/M	Nil	Nil	Nil	02-Apr	02-Apr	Nil	Nil	Nil
26	J13403	33/M	Nil	Nil	Nil	02-Mar	02-Mar	Nil	Nil	Nil
27	I89781	40/M	Nil	Nil	Nil	02-Mar	01-Feb	Nil	Nil	Nil
28	H29460	40/M	Nil	Nil	Nil	03-May	03-May	Nil	Nil	Nil
29	J18854	25/F	Nil	Nil	Nil	02-Apr	01-Feb	Nil	Nil	Nil
30	J18916	26/M	Nil	Nil	Nil	02-Mar	01-Feb	Nil	Nil	Nil

NEERKURI AND NEIKURI EXAMINATION

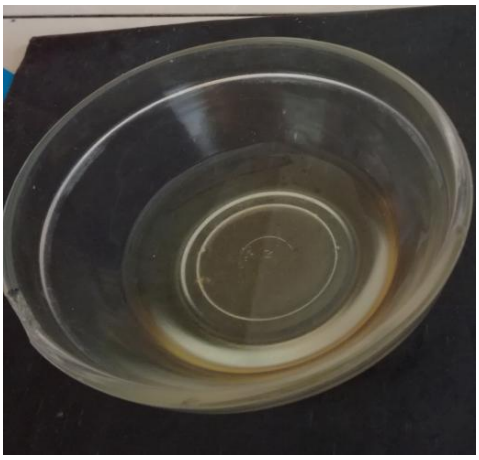
NEIKURI

OP NO: H 31066 21/M

Round shape

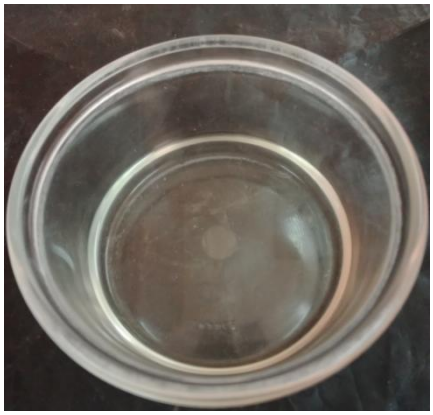
OP NO F00390 43/F

Sieve pattern



OP NO .I 23403 26/F

Pearl shape



NEERKURI

OP NO:H 31066 21/M

Yellow colour

OP NO F00390 43/F

Yellow colour

OP NO .I 23403 26/F

Pale yellow ,clear

VIZHI & NAA EXAMINATION

OP.No.J18916 , 26/M –Normal eye

OP.No.J18916 , 26/M –Normal tongue

OP.No.J13403, 33/M – Pallor eye

OP.No.J13403, 33/M – Coated tongue

OP.No. I90761, 30/F – Black spotted tongue

12. DISCUSSION

Mirutthu vaatham is described in Sage Yugi in Yugi vaithya cinthamani and may be correlated with Irritable bowel Syndrome. The author had screened 70 patients with complaints of constipation and diarrhoea in the outpatient Department of National Institute of Siddha. Among those 70 cases, 30 cases were enrolled in the study and observed for symptoms and signs.

Distribution of cases byAge group

Among 30cases 40% cases were in the age group of 20-30 years age group, 26.6% cases were between31-40 years age group. In this study the maximum number of cases(40%) fell under 20-30 years age age group.This shows that the prevalence of Mirutthu vaatham is the most in men of adolescent 20+ age categories.

Distribution of cases by Diet:

Among 30 cases of IBS , 93.3% cases were non vegetarian, and 6.66% cases were vegetarian. Most of them were non vegetarians because non vegetarians are more prevalent in general population.

Distribution of cases by Paruvakaalam:

Among 30 cases, 30% cases had affected at Elavenir kalam, 27 %cases had affected at Pinpanikalam, 17%cases had affected at Mudhuvenir kalam,13% cases affected Munpanikalam, and 7%cases had affected at Kaarkalam and Koothir kalam..The occurance of disease is mostly during Elavenir kaalam(Chithirai,Vaigasi), in which the pitham aggrevates and causes this disease.

Distribution of cases byThinai

Among 30 cases, 60%of cases had affected in neithal nilam, 27%cases had affected in Kurinji nilam and 10 % cases had affected in Marutham nilam,and 3% cases affected in Mullai nilam.

Distribution of cases by Clinical features

In this study 100% cases had abdominal discomfort, constipation, diarrhoea, fatigue and weariness of limbs .Among all the symptoms ,the fear played the last role and no patients reported dropsy .

Distribution of cases by Iympurikal

In Iympulangal (five senses), 16.6% cases had vision difficulty, 3.33% had pimple.

Distribution of cases by Kanmentheriyangal

In Kanmentheriyangal , 100% cases of Kaal,Kai got deranged resulting in weariness of limbs ,100% cases of Eruvai got deranged resulting in constipation and diarrhoea.

Distribution of cases by Dasanaadikal

In Naadi, Kugu had affected. Kugu got deranged lead to constipation and diarrhoea.

Distribution of cases by Uyir Thathukkal

Derangement inVathakutram

Among 30 cases Uyir Thathukal vatham ,6% cases had Kirukaran affected , 13% cases had Piranan affected,23% had Koorman affected and all of cases had Abanan,

Samanan, and Viyanan affected. In this study 100% cases were affected by abanan, samanan and viyanan. The abanan which is responsible for the downward movement have affected resulting in the abnormality of excretory function and viyanan due to abnormality in the abdominal movements.

Derangement in Pithakutram

Among 30 cases, 16.6% had affected Aalosagam, 13.3% had affected Anarpitham, 3.3% of cases had affected Ranjagam and Prasagam and all the cases had affected Saathaga pitham.

DerangementinKabhakutram

Among 30 cases , 3.3% cases were affected in Tharpagam, 13.3% cases were affected in Kilethagam and all the cases are affected by Santhigam.

Distribution of cases by Udal Thathukkal

Among the seven somatic components of 30 cases, 100% of cases had affected Saaram,Senneer, Oon , 47% cases had affected Enbu, and 43% cases had affected Kozhuppu.

Distribution of cases by Kosankal

Among 30 cases, 100% cases affected Annamayakosankal got deranged resulting in constipation, 10%case affected Manomayakosam got deranged resulting in stress.

Distribution of cases by Udalvanmai

Among 30 cases, 63.3% cases were Iyalbu,20% cases were vanmai,16.6% cases were Melivu.

Distribution of cases by Thegi

Among the 30 cases, 43.3% were in Pitha Vatham constitution,26.6% were in VathaPitham constitution,23.3% were Pitha Vatham constitution,3.3% each were in Vatham Kapham and Kapha Pitham constitution. Most of the cases and healthy volunteers were pitha vatham and vatha pitham physique.The pitha vatham and vatha pitham temperament patients are prone to have mirutthu vaatham .When compared with individual humour patients.

Distribution of cases by Thegiyin niram

In 30 cases ,70% cases were dark complexion, 23.3% cases were fair complexion and 6.6% were white complexion.

Distribution of cases by Naadi

Among 30 cases 76.6% cases were vanmai ,and 23.3% cases are menmai in Naadi nithanam ,all the cases were thannadai in naadi panbu,43.3% cases were vatha pitham,40% cases were pitha vatham,13.3% cases were pitha kapham,3.3% cases were vatha kapham.

Distribution of cases by Sparisam

Among 30 Cases,73.3% cases are mitha veppam ,3.3% cases are migu veppam condition and 23.3%cases thatpam. And sweating condition 66.6% cases are normal, 33.3% of cases are increased condition. Thoduvali thanmai,73.3% cases present. No one have udal varatchi.100% cases are normal skin.

Distribution of cases by Naa

Among 30 cases 16.6% had black pigmented tongue 3.33% cases had pallor tongue and 80% cases normal colour of the tongue. Among 30 cases,40% cases had coated tongue, 60% cases had normal tongue. Majority of Cases 53%cases were sweet taste in tongue.100% of cases were normal salivation.

Distribution of cases byMozhi

Among 30 cases, 93.3% cases have sama oli and 6.6% cases are urattha oli.

Distribution of cases by Vizhi

Among 30 cases, 11.66% had Veluppu Venvizhi, 8.3% cases are sivappu venvizhi. 80% no discoloration in Venvizhi. Each 6.66% were Kan erichal and Peelai seruthal.

Distribution of cases by Malam

Among 30cases, 100% cases were manjal colour in motion. 100% cases had sikkal, siruthal, kalichchal and habitual constipation, 46.6% cases were seetham present,33.3% have venmai present.

Distribution of cases by Neerkkuri

Among 30 cases, 100% cases had mild aromatic in neer manam .50% of cases had yellow colour in urine,23.3% of cases had Pale yellow colour in urine,26.6% cases had colurless in nature.33.3% of cases had frothy urine, and 66.6% of cases had absent of frothy in urine. All of cases had normal deposits.

Distribution of cases by Neikkuri

Majority of the cases 36.6% were mellena paraval (Round shape) in neikuri. Majority of healthy volunteers 41.6% had muthu shape in neikuri.

Distribution of cases byManikadai nool

Among 30 cases 13.3% of cases were 81/4 finger breadth,3.3%cases 81/2 &10 finger breadth,13.3% cases 83/4 finger breadth, 23.3% was 9finger breadth, 20% cases were 91/4 finger breadth, 6.6% 0f cases 8,9 ½ &9 ¾ finger breadth. Majority of the 7 cases were 9 viralkadai at manikadainool. As per siddha text, no indication for Mirutthu vaatham.

Therefore the patients with the range of 9-91/4 wrist circumetric finger breadth may be referred to have a predilection to develop Mirutthu vaatham.Such people may be advised to follow the precautionary steps to avoid the development of Mirutthu vaatham as a preventive measure.

13. SUMMERY AND CONCLUSION

Mirutthu vaatham a clinical entity was described by Sage Yugi in his wisdom. The study conducted has come out with excellent results validating the clinical features of Mirutthu vaatham elucidated in an ultra short poetic segment by Yugi.

The study was aimed at evolving a set of exclusive Siddha diagnostic findings for Mirutthu vaatham with the observation and inference of various parameters like Naadi, Neikkuri and disease acquired season, it can be concluded that all of them point to the development or vitiation of humour leading to the disease Mirutthu vaatham

The patient reported with the symptoms of Mirutthu vaatham were subjected to the standard set of investigations, the results and findings of the investigations were suggestive of Mirutthu vaatham according to modern classification of disease.

Manikadai Nool and Neikkuri findings may help in the identifying of preponderance in a person to develop Mirutthu vaatham hence it can be used as a screening measure to advise the preventive measures well in advance.

Almost all the patients diagnosed as Mirutthu vaatham had normal study of sigmoidoscopy evidence conforming to the correlation of disease with Irritable bowel syndrome. From the analysis done between Mirutthu vaatham cases and control group, notable variations were observed in both Siddha and Modern parameters.

Interestingly, it was found that the symptoms presented by the patients in the study were those of a constant subset of symptoms of Irritable bowel syndrome explained in the present day classification. It correlated with all of the symptoms mentioned by Yugimuni under Mirutthu vaatham.

Thus the author concludes by throwing lights on validation of symptomatology and exclusive Siddha diagnostic methodology for Mirutthu vaatham, so that a physician can arrive at proper treatment procedures by rightly diagnosing the disease.

15. BIBLIOGRAPHY:

1. Yugi vaithya chinthamani, Pg. no.92, Publisher-Indian medicine and Homeopathy department.
2. Tamil- english dictionary, T.V.Sambasivam pillai, Volumes – all (I-VI) 2nd edition 1991.
3. Siddha Maruthuvanga Surukkam.
4. Noinaadal noimudhal naadal thirattu part-I, Dr.M.Sanmugavelu, H.B.I.M, 5th edition 2009, Publised by Indian medicine - Homeopathy department, Chennai - 600106. pg.no.347
5. Theraiyar neerkuri vaithiyam, S.P.Ramachandran, 1st edition june 2000, Publised by Thamarai noolagam, pg. no.12
6. Cecil Text book of medicine, Pg No807, Edition- 22nd , Editors - Lee Goldman, Dennis Ausiello MD
7. Davidson's principle and practice of medicine, Pg No - 818, Edition - 19th, Editors - Christophen haslett, Edwin R.Chilvers, Nicholas A.Boon, Nicki R.Colledge.
8. Harison's principle of internal medicine, PgNo-1789, Edition-16th, Editors – Dennis L.Kasper MD, Eugene BraunwaldMD, Anthony S.Fauci MD, Stephen .L.Hauer MD, Dan. L.Longo MD,J.LarryJameson MD.
9. Gray's Anatomy pg no:1171,Edition-39th, Editors-Barry KB Berovitz BDS,Neil R Borley FRCS (Ed)MS,Alan R Crossman Bsc PhD Dsc,Mark s Davies MBBS FRCS(ortho).
10. Essentials of Human Physiology R. Suresh Msc, Ph.D Pg no:159 First published: April 2013.

11. Essential of Medical physiology K Sembulingam & Prema sembulingam Edition-5th edition, pg no:253.
12. B D Chaurassia's Human Anatomy vol:2, Edition- 4th, pg no:320
13. Textbook of Human Anatomy Inderbir singh, pg no:249, Edition- 5th
14 . https://ieonline.microsoft.com/#ieslice
15. https://patient.info/in/health/irritable-bowel-syndrome-diet-shee
16.Maltitolhttps://www.niddk.nih.gov/health-information/digestive-diseases/irritable-bowel-syndrome/eating-diet-nutrition
17.Complicationshttp://www.mayoclinic.org/diseases-conditions/irritable-bowel-syndrome/basics/complications/con-20024578
18. Sidebar http://www.aboutibs.org diagnosis-of-ibs.html

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F.No.NIS/6-20/IEC/15-16 Dt: 05.10.2015

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator:Dr.K.Kanchana Department of Noi Naadal	
Protocol title: A study on the symptamatology and diagnostic methodology of Mirutthu vaatham	
Documents filed	1) Protocol, 2) Data Collection forms 3) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	Yes
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/IEC/9/2014-15/26 – 26.08.2015

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.

Chairman **Member Secretary**

The Tamil Nadu Dr.M.G.R.Medical University

69,Anna Salai,Guindy,Chennai - 600 032.

This Certificate is awarded to Dr/Mr/Mrs.....K. Kavehana.....

for participating as ~~Resource~~ ~~Person~~ / Delegate in the Eighteenth Workshop on

" RESEARCH METHODOLOGY & BIOSTATISTICS "

FOR AYUSH POST GRADUATES & RESEARCHERS

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 20 th to 24 th July 2015.

Dr.N.KABILAN, M.D.(Siddha)
READER,DEPT.OF SIDDHA

Prof. **Dr.P.ARUMUGAM,** M.D.,
REGISTRAR i/c

Prof. **Dr.D.SHANTHARAM,** M.D., D.Diab.,
VICE - CHANCELLOR

Clinical Trial Details (PDF Generation Date :- Fri, 14 Jul 2017 03:13:47 GMT)

CTRI Number	CTRI/2017/06/008785 [Registered on: 08/06/2017] - **Trial Registered Retrospectively**
Last Modified On	12/04/2017
Post Graduate Thesis	Yes
Type of Trial	Observational
Type of Study	Follow Up Study
Study Design	Single Arm Trial
Public Title of Study	A study on Kudal Noi
Scientific Title of Study	A Study on the symptomatology and diagnostic methodology of Mirutthu Vaatham

Secondary IDs if Any

Secondary ID	Identifier
NIL	NIL

Details of Principal Investigator or overall Trial Coordinator (multi-center study)

Details of Principal Investigator	
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Source of Monetary or Material Support

Source of Monetary or Material Support
> Room no 5 out patient ward Ayothidoss pandithar hospital National Institute of Siddha Tambaram Sanatorium

Primary Sponsor

Primary Sponsor Details	
Name	self
Address	Ayothidoss Pandithar hospital National Institute of Siddha Tambaram Sanatorium Chennai 47
Type of Sponsor	Research institution and hospital

Details of Secondary Sponsor

Name	Address
NIL	NIL

Countries of Recruitment

List of Countries
India

Sites of Study

Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
DR K KANCHANA	NATIONAL INSTITUTE OF SIDDHA	Ayothidoss Pandithar Hospital National institute of Siddha Tambaram Sanatorium Chennai 47 Kancheepuram TAMIL NADU	9952827840 drkkanchana@gmail.com

Details of Ethics Committee

Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
INSTITUTIONAL ETHICAL COMMITTEE	Approved	26/08/2015	No

Regulatory Clearance Status from DCGI

Status	Date
Not Applicable	No Date Specified

Health Condition / Problems Studied

Health Type	Condition
Patients	patients with abdominal discomfort constipation and diarrhoea

Intervention / Comparator Agent

Type	Name	Details

Inclusion Criteria

Inclusion Criteria	
Age From	20.00 Year(s)
Age To	50.00 Year(s)
Gender	Both
Details	Patients with the symptoms of Abdominal discomfort Constipation Diarrhoea Fatigue Weariness of Limbs Dropsy and Fear

Exclusion Criteria

Exclusion Criteria	
Details	Any organic lesions in the intestine Any other systemic illness Vulnerable group

Method of Generating Random Sequence	Not Applicable
Method of	Not Applicable

Concealment	
Blinding/Masking	Open Label

Primary Outcome

Outcome	Timepoints
establishing the relavence of sage Yugi symptomatology about Mirutthu vaatham with that of the present day patinet sample which is compared with chronic colon disease	At the end of the study

Secondary Outcome

Outcome	Timepoints
arriving at an interpretation of Mirutthu vaatham its Siddha pathophysiology and symptomatology with reference to modern pathological concept of chronic colon disease which is closely related to Irritable Bowel Syndrome Findings of Udal vaagu and Kuttra vaagu Formulation of line of treatment dietary regimen for the condition of Mirutthu vaatham	At the end of the study

Target Sample Size	**Total Sample Size=**30 **Sample Size from India=**30
Phase of Trial	N/A
Date of First Enrollment (India)	26/09/2016
Date of First Enrollment (Global)	No Date Specified
Estimated Duration of Trial	**Years=**1 **Months=**0 **Days=**0
Recruitment Status of Trial (Global)	Not Applicable
Recruitment Status of Trial (India)	Open to Recruitment
Publication Details	nil
Brief Summary	Siddha medicine is one of the ancient system of medicine, Mirutthu vaatham is one among the intestinal disease mentioned by Sage Yugi in his text Yugi Vaithiya Chinthamani. Mirutthu vaatham is a disease of intestine with the symptoms of altered bowel movements, abdominal discomfort, fear, weariness of limbs, dropsy, fatigue. In NIS OPD we are receiving more than 10-15 patients with the above symptoms per day. so the investigator intreseted in elaborating the symptoms of mirutthu vaatham and also to establish the diagnostic and symptomatology of the disease Mirutthu vaatham. Mirutthu vaatham is the diagnosis which is related to Chronic colon disease and the symptoms are closely related to Irritable Bowel Syndrome.

ANNEXURE - I

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VAATHAM

FORM I - SCREENING AND SELECTION PROFORMA

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____ 4. S.No: _____

5. Name: _____6. Age (years): ☐. Gender: M ☐ ☐

8. Occupation: _____ 9. Income: _____

10. Address: .....

.....

.....

11. Contact Nos: ----------

12. E-mail : ----------

13. Whether taken any other medication for the same disease previously YES ☐ NO ☐

If yes,
Name of the medicines :

Duration :

If resorted to Siddha medicine for the treatment of Mirutthu vaatham YES ☐ NO ☐

Reasons for resorting to Siddha medicine :

	YES	NO
(a) Cost effectiveness :	☐	☐
(b) No side effects in Siddha medicine :	☐	☐
(c) Dissatisfaction with the previous treatment :	☐	☐

INCLUSION CRITERIA

Group I

	YES	NO
1. Age 20-50yrs	☐	☐
2.Abdominal discomfort	☐	☐
3. Constipation	☐	☐
4. Diarrhoea	☐	☐

Group II

1. Fatigue	☐	☐
2. Dropsy	☐	☐
3. Weariness of limbs	☐	☐
4. Fear	☐	☐

Patients who fulfill Group I and any 2 criteria in Group II will be included in the study.

EXCLUSION CRITERIA

	YES	NO
Any organic lesions in intestine	☐	☐
Any systamic illness	☐	☐
Vulnerable group	☐	☐

Date : **P.G Student** **Faculty**

ANNEXURE – I A

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VATHAM

FORM I A - HISTORY PROFORMA

1. Sl.No of the case: _____

2. Name:_____ Height: _____ cms Weight: _____ Kg

3. Age (years): _____ DOB ☐☐ ☐☐ ☐☐☐☐
D D M M Y E A R

4. Educational Status:

1) Illiterate ☐ 2) Literate ☐ 3) Student ☐ 4) Graduate/Postgraduate ☐

5. Nature of work:

1) Sedentary work ☐

2) Field work with physical labour ☐

3) Field work Executive ☐

6. Complaints and Duration:

_____

_____

_____

_____

_____

7. History of present illness:

_____

_____

_____

8. History of Past illness:

	1. Yes	2. No
Systemic hypertension	☐	☐
Ischemic heart disease	☐	☐
Dyslipidaemia	☐	☐
Jaundice	☐	☐
Bronchial asthma	☐	☐
Any drug allergy	☐	☐
Any surgeries	☐	☐
Any major illnesses	☐	☐

9. Habits:

	1. Yes	2. No
Smoker	☐	☐
Alcoholic	☐	☐
Drug Addiction	☐	☐
Betel nut chewer:	☐	☐
Tea	☐	☐
Coffee	☐	☐
Milk	☐	☐

DIET HISTORY

Type of diet V ☐ NV ☐ M ☐

VEGETARIAN FOODS	1. Yes	2. No
sweets	☐	☐
Ice creams	☐	☐
Junk foods	☐	☐

NON VEGETARIAN FOODS

Meat ☐ ☐

Fish ☐ ☐

Crab ☐ ☐

DRINKS

Soft drinks ☐ ☐

10. Personal history:

Marital status: Married ☐ Unmarried ☐

No. of children: Male: _____ Female: _____

Socio economic status:

11. Family history:

History of Irritable bowel disease --

12.. Menstrual & Obstetric history:

Age at menarche _____ years

Gravidity ☐ Parity ☐

Duration of the menstrual cycle:

Constancy of cycle duration: 1.Regular ☐ 2.Irregular ☐

7. GENERAL ETIOLOGY FOR **“MIRUTTHU VAATHAM”**:

	YES	NO
1. Altered GIT motility	☐	☐
2. Food habit	☐	☐
3. Psychological disturbance	☐	☐

8. CLINICAL SYMPTOMS OF **“MIRUTTHU VAATHAM”**

	YES	NO
Constipation	☐	☐
Diarrhoae	☐	☐
Fatigue	☐	☐
Dropsy	☐	☐
Weariness of limbs	☐	☐
Fear	☐	☐

Date : **P.G Student** **Faculty**

ANNEXURE - II
DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VATHAM

FORM II - CLINICAL ASSESSMENT

1. Serial No: _____

2. Name: _____

3. Date of birth: | | | | | | | | |
D D M M Y E A R

4. Age: _____ years

5. Date: _____

GENERAL EXAMINATION:

1. Height: _____ cms. BMI _____ (Weight Kg/ Height m2)

2. Weight (kg):

3. Temperature (°F):

4. Pulse rate:

5. Heart rate:

6. Respiratory rate:

7. Blood pressure:

8. Pallor:

9. Jaundice:

10. Cyanosis:

11. Lymphadenopathy:

12. Pedal edema:

13. Clubbing:

14. Jugular vein pulsation

EXAMINATION

1.Inspection

2.palpation

3..Percussion

4.auscultation

VITAL ORGANS EXAMINATION

	1. Normal	2. Affected	
1. Heart	☐	☐	_____
2. Lungs	☐	☐	_____
3. Brain	☐	☐	_____
4. Liver	☐	☐	_____
5. Kidney	☐	☐	_____
6. Spleen	☐	☐	_____
7. Stomach	☐	☐	_____

SYSTEMIC EXAMINATION:

1. Cardio Vascular System _____

2. Respiratory System _____

3. Gastrointestinal System _____

4. Central Nervous System _____

5. Uro genital System _____

6. Endocrine System _____

SIDDHA SYSTEM OF EXAMINATION

[1] ENVAGAI THERVU [EIGHT-FOLD EXAMINATION]

I. NAADI (KAI KURI) (RADIAL PULSE READING)

(a) Naadi Nithanam (Pulse Appraisal)

1. Kalam (Pulse reading season)

1. Kaarkaalam (Rainy season)	☐	2.Koothirkaalam (Autumn)	☐
3. Munpanikaalam (Early winter)	☐	4.Pinpanikaalam (Late winter)	☐
5. Ilavenirkaalam (Early summer)	☐	6.Muthuvenirkaalam (Late summer)	☐

2. Desam (Climate of the patient's habitat)

1. Kulir (Temperate)	☐	2. Veppam (Hot)	☐

3. Vayathu (Age)

1. 1-33yrs	☐	2. 34-66yrs	☐	3. 67-100	☐

4. Udal Vanmai (General body condition)

1. Iyyalbu (Normal built)	☐	3. Valivu (Robust)	☐	4.Melivu (Lean)	☐

5. Vanmai (Expansile Nature)

1. Vanmai	☐	2.Menmai	☐

6. Panbu (Habit)

1. Thannadai (Playing in)	☐	2. Puranadai (Playing out)	☐	3.Illaitthal (Feeble)	☐
4. Kathithal (Swelling)	☐	5.Kuthithal (Jumping)	☐	6.Thullal (Frisking)	☐

7. Azhutthal (Ducking) ☐ 8. Padutthal (Lying) ☐ 9. Kalatthal (Blending) ☐

10. Munnokku (Advancing) ☐ 11. Pinnokku (Flinching) ☐ 12. Suzhalal (Revolving) ☐

13. Pakkamnokku (Swerving) ☐

(b) Naadi nadai (Pulse Play)

1. Vali ☐ 2. Azhal ☐ 3. Iyyam ☐

4. Vali Azhal ☐ 5. Azhal Vali ☐ 6. Iyya Vali ☐

7. Vali Iyyam ☐ 8. Azhal Iyyam ☐ 9. Iyya Azhal ☐

II.NAA (TONGUE)

1. Maa Padinthiruthal (Coatedness) 1. Present ☐ 2. Absent ☐

2. Niram (Colour) 1.Karuppu (Dark) ☐ 2. Manjal (Yellow) ☐ 3. Velluppu (Pale) ☐

3. Suvai (Taste sensation) 1.Pulippu (Sour) ☐ 2. Kaippu (Bitter) ☐ 3. Inippu (Sweet) ☐

4. Vedippu (Fissure) 1. Absent ☐ 2. Present ☐

5. Vai neer ooral (Salivation) 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐

III.NIRAM (COMPLEXION)

1. Karuppu (Dark) ☐ 2.Manjal (Yellowish) ☐ 3.Velluppu (Fair) ☐

IV. MOZHI (VOICE)

1. Sama oli (Medium pitched) ☐ 2 Urattha oli (High pitched) ☐ 3.Thazhantha oli (Low pitched) ☐

V. VIZHI (EYES)

1. Niram (Venvizhi)
(Discolouration)

1. Karuppu (Dark) ☐ 2. Manjal (Yellow) ☐

3. Sivappu (Red) ☐ 4.Velluppu (White) ☐

5. No Discoloration ☐

2. Kanneer (Tears) 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐

3. Erichchal (Burning sensation) 1.Present ☐ 2. Absent ☐

4. Peelai seruthal (Mucus excrements) 1.Present ☐ 2. Absent ☐

VI. MEI KURI (PHYSICAL SIGNS)

1. Veppam (Warmth) 1. Mitham (Mild) ☐ 2. Migu (Moderate) ☐ 3. Thatpam (Low) ☐

2. Viyarvai (Sweat) 1. Increased ☐ 2. Normal ☐ 3. Reduced ☐

3. Thodu vali (Tenderness) 1. Absent ☐ 2. Present ☐

VII. MALAM (STOOLS)

1. Niram (Color) 1. Karuppu (Dark) ☐ 2. Manjal (Yellowish) ☐

3. Sivappu (Reddish) ☐ 4. Velluppu (Pale) ☐

2. Sikkal (Constipation) 1. Present ☐ 2. Absent ☐

3. Sirutthal (Poorly formed stools) 1. Present ☐ 2. Absent ☐

4. Kalichchal (Loose watery stools) 1. Present ☐ 2. Absent ☐

5. Seetham (Watery and mucoid excrements) 1. Present ☐ 2. Absent ☐

6. Vemmai (Warmth) 1. Present ☐ 2. Absent ☐

7. History of habitual constipation 1. Present ☐ 2. Absent ☐

8. Passing of a) Mucous 1. Yes ☐ 2. No ☐

b) Blood 1. Yes ☐ 2. No ☐

VIII. MOOTHIRAM (URINE)

(a) NEER KURI (PHYSICAL CHARACTERISTICS)

1. Niram (colour)

Colourless	☐	Milky purulent	☐	orange	☐
Red	☐	Greenish	☐	dark brown	☐
Bright red	☐	Black	☐	Brown red or yellow	☐

2. Manam (odour)		Yes	No
Ammonical	:	☐	☐
Fruity	:	☐	☐
Others	: _____		

3. Edai (Specific gravity)		Yes	No
Normal (1.010-1.025)	:	☐	☐
High Specific gravity (>1.025)	:	☐	☐
Low Specific gravity (<1.010)	:	☐	☐
Low and fixed Specific gravity (1.010-1.012):		☐	☐

4. Alavu(volume)		Yes	No
Normal (1.2-1.5 lt/day)	:	☐	☐
Polyuria (>2lt/day)	:	☐	☐
Oliguria (<500ml/day)	:	☐	☐

5. Nurai(froth)		Yes	No
Clear	:	☐	☐
Cloudy	:	☐	☐

6. **Enjal (deposits)**	:	Yes	No
		☐	☐

(b) NEI KURI (oil spreading sign)

1. Aravam (Serpentine fashion)	☐	2. Mothiram (Ring)	☐
3. Muthu (Pearl beaded appear)	☐	4. Aravil Mothiram (Serpentine in ring fashion)	☐
5. Aravil Muthu (Serpentine and Pearl patterns)	☐	6. Mothirathil Muthu (Ring in pearl fashion)	☐
7. Mothirathil Aravam (Ring in Serpentine fashion)	☐	8. Muthil Aravam (Pearl in Serpentine fashion)	☐
9. Muthil Mothiram (Pearl in ring fashion)	☐	10. Asathiyam (Incurable)	☐
11. Mellena paraval (Slow spreading)	☐		

12. others:_____

[2]. MANIKADAI NOOL (Wrist circummetric sign) : _____ fbs

[3]. **IYMPORIGAL /IYMPULANGAL**

(Penta sensors and its modalities)

	1. Normal	**2. Affected**
1. Mei (skin)	☐	☐
2. Vaai (Mouth/ Tongue)	☐	☐
3. Kan (Eyes)	☐	☐
4. Mookku (Nose)	☐	☐
5. Sevi (Ears)	☐	☐

[4]. KANMENTHIRIYANGAL /KANMAVIDAYANGAL
(Motor machinery and its execution)

	1. Normal	**2. Affected**
1. Kai (Hands)	☐	☐
2. Kaal (Legs)	☐	☐
3. Vaai (Mouth)	☐	☐
4. Eruvai (Analepy)	☐	☐
5. Karuvaai (Birth canal)	☐	☐

[5]. YAKKAI (SOMATIC TYPES)

Vatha constitution	Pitha constitution	Kaba constitution
Lean and lanky built ☐	Thin covering of bones and joints by soft tissue ☐	Plumpy joints and limbs ☐
Hefty proximities of limbs ☐	Always found with warmth, sweating and offensive body odour ☐	Broad forehead and chest ☐
Cracking sound of joints on walking ☐	Wrinkles in the skin ☐	Sparkling eyes with clear sight ☐
Dark and thicker eye lashes ☐	Red and yellow admixed complexion ☐	Lolling walk ☐
Dark and light admixed complexion ☐	Easily suffusing eyes due to heat and alcohol ☐	Immense strength despite poor eating ☐
Split hair ☐	Sparse hair with greying ☐	High tolerance to hunger, thirst and fear ☐
Clear words ☐	Intolerance to hunger, thirst and heat ☐	Exemplary character with good memory power ☐
Scant appetite for cold food items ☐	Inclination towards perfumes like sandal ☐	More liking for sweet taste ☐
Poor strength despite much eating ☐	Slender eye lashes ☐	Husky voice ☐
Loss of libido ☐	Pimples and moles are plenty ☐	
In generosity ☐		
Sleeping with eyes half closed ☐		

RESULTANT SOMATIC TYPE: _____

[6] GUNAM

1. Sathuva Gunam ☐ 2. Rajo Gunam ☐

3. Thamo Gunam ☐

SIDDHA SYSTEM OF EXAMINATION
DETERMINATION OF PRAKRITI /UDALIYAL (Body Constitution)

1. PHYSIOLOGICAL STATUS (PHS)		
1.01 Status of Appetite: (AD)		
A.	Good appetite	
B.	Stable appetite with usually moderate desire to eat	
C.	Variable appetite	
1.02 Dietary/Eating habits (DH)		
A.	Enjoys eating, ready to eat mostly & hates to miss food	
B.	Regular food habits, but can spend hours without food	
C.	Desirous to take food, eats less at a time, needs mid-meals	
1.03 Bowel Habits (BH)		
A.	Regular, once-a-day, stool well formed, if constipated it is mild	
B.	(Respond to medium strength laxative)	
C.	Regular & frequent, stool semisolid or loose, rarely constipated.	
1.04 Sleeping Pattern (SH)		
A.	Sleeps easily but light	
B.	Sleeps easily and sound (heavily)	
C.	Trouble to get sleep, light sleep / Variable sleep pattern	
1.05 Morning feelings, after leaving the bed (MF)		
A.	Don’t feel fresh	
B.	Feel fresh. Feel well even with less sleep.	
C.	Feel fresh but not good when less hours of sleep have.	
1.06 Dreams (DM)		
A.	Cool and peaceful dreams, not bothers to remember	
B.	Passionate dreams, sees heat, light & remembers well	
C.	Plenty of dreams, mostly related to motion, usually forgets	
1.07 Physical working capacity/physical strength		
A.	Starts with speed & gets exhausted easily	
B.	Loves hard work, has moderate capacity	
C.	Good stamina but slow and not interested for physical work	
1.08 Performance of activities		
A.	Quickly with a lot of initiative	
B.	Moderately with medium initiative	
C.	Slow, steady and balance activities	
1.09 Talking		
A.	Very fast missing words	
B.	Sharp, provocative and clear-cut	
C.	Slow, clear and stable	
1.10 Walking		
A.	Very quick with swift movement	
B.	Normal and rhythm	
C.	Slow and steady	
1.11 Associated movements of body while working		
A.	Excessive and frequent, difficult to tolerate	
B.	Less thirst, easy to tolerate	

C.	Moderate perspiration, consistent to climate, with pleasant smell.	
1.12 Nature of Thirst (TN)		
A.	Excessive and frequent, difficult to tolerate	
B.	Less thirst, easy to tolerate	
C	Moderate and variable thirst	
1.13 Status of Perspiration (SP)		
A.	Scanty even in hot climate but odourless	
B.	Profuse with strong odour	
C.	Moderate perspiration, consistent to climate, with pleasant smell.	
1.14 Sexual qualities (SQ)		
A	Variable, strong desire, overindulgence, & gets exhausted	
B.	Moderate with domina ting behavior	
C.	Usually low and steady desire, with good stamina	
1.15 Quantity of seminal discharge		
A.	Scanty and comparatively thin in consistency	
B.	Moderate and normal	
C.	Plenty and thick	
1.16 Fertility or productivity		
A.	Comparatively lesser	
B.	Less	
C.	Capable of producing good no. of off springs	
1.17 Longevity or average age		
A.	Short life span	
B.	Moderate life span	
C.	Long life span	
1.18 Resistance to diseases (RD)		
A.	Usually poor. Frequently fall ill.	
B.	Medium	
C.	Good. Able to tolerate seasonal variation, food etc. well	
1.19 Climatic Preferences (CP)		
A.	Prefers warm, avoids cold climate	
B.	Likes cold, but intolerant to warm/hot	
C.	Likes normal climate & prefers warm in comparison to cold	
2. MENTAL/PSYCHOLOGICAL STATUS		
2.01 Mental Reactions (MR)/Personality Traits		
A	Very sensitive, reacts quickly	
B.	Gets Irritated easily & sustains it.	
C.	Cool, calm, avoids confrontations	
2.02 Memory Status (MS)		
A.	Remembers easily & tends to forget easily	
B.	Takes time to grasp, but retains for long	
C.	Remembers easily and tends to retain	
2.03 Leadership quality (LQ)		
A.	Don’t like to lead and happy as a follower.	
B.	Requires commanding status.	
C.	Avoid leading.	
2.04 Decision making capacity (DMC)		

A.	Takes immediate decision without thinking much.	
B.	Takes decision after properly analyzing the facts.	
C.	Avoid taking decision. Usually keeps them pending.	
2.05 Concentration Power (CP)		
A.	Very easy to concentrate on a work, but not for long duration	
B.	Difficult to concentrate on a work	
C.	Retains concentration for a long period	
2.06 Attitude towards problems or difficulties		
A.	Lot of worrying, instability in reaction	
B.	Angry, over awed, easily provoked and highly irritable	
C.	Peaceful, slow, steady and balance	
2.07 Nature		
A.	Easily irritable, irritating to others, exaggerating, anxious materialistic liking	
B.	Polite but hot-tempered, proudy, brave, bold, less but good friendship	
C.	Polite, decent, not greedy, appreciating, have good and long lasting friendship	
2.08 Liking about taste (TL)		
A.	Sweet, salt & sour	
B.	Sweet, bitter & astringent	
C.	Pungent, astringent & bitter	
3. PHYSICAL FEATURES: (PF)		
3.01 Body frame (BF)		
A.	Thin body frame, unusually long/short	
B.	Medium frame	
C.	Broad, Large frame	
3.02 Body weight (BW)		
A.	Moderate/Average weight	
B.	Underweight or Tendency of fluctuation	
C.	Overweight or with a tendency to gain weight	
3.03 Distribution of body fat (DBF)		
A.	Unequal/on specific areas	
B.	Evenly distribution	
C.	Scanty deposition of body fat.	
3.04 Nature/Texture of skin		
A.	Delicate, Irritable skin, gets wrinkles easily	
B.	Dry, rough, cracked, or having a tendency of cracking	
C.	Smooth, firm, soft, clear with good lusture, not prone to disorders	
	3.05 Complexion / skin color (SC)	
A.	Extremely fair / pinkish	
B.	Fair, reddish, burns easily	
C.	Comparatively dull or darkish, tans easily	
3.06 Body Hair (BH)		
A.	Dry, rough, coarse, lustureless & curly	
B.	Soft, scanty, straight, fine textured	
C.	Thick, shiny, moderate	
3.07 Forehead (FH)		

A.	Large	
B.	Medium	
C.	Small	
3.08 Eyes (EF)		
A.	Rolling, restless, small, dull & lusterless	
B.	Sharp, medium sized with sclera of reddish tinge	
C.	Large calm stable eyes with milky white sclera	
3.09 Teeth (TE)		
A.	Teeth are of average size, yellowish, prone to cavities	
B.	Dry, cracked, irregular dull white	
C.	Large, even, gleaming white	
3.10 Tongue (TO)		
A.	Thin tongue, with blackish spots, often coated with thin adherent coating	
B.	Medium, Reddish, occasionally coated with yellow or red coating	
C.	Thick usually clear, rarely coated, coating is usually thick white	
3.11 Lips (LP)		
A.	Soft, moist & reddish	
B.	Dry, thin & blackish	
C.	Thick & glossy	
3.12 Blood Vessels (BV)		
A.	Prominent	
B.	Less prominent	
C.	Not visible	
3.13 Scalp Hair (SH)		
A.	Dark in Shade, coarse, rough, easily prone to dandruff and split ends.	
B.	Thin, delicate, straight, light coloured, turn grey at an early age	
C.	Strong, thick, dark, slightly wavy with good lusture, oiliness is usually one of the chief complaints	

3.14 Joints (JT)		
A.	Crackling joints, hyper mobile in nature	
B.	Comparatively normal but have soft and loose ligaments	
C.	Well lubricated, strongly built joints which are well organized, well covered	
3.15 Voice (VR)		
A.	Rough, unclear voice, which turns hoarse or cracks on strain	
B.	Concise, sharp voice, intense in nature & high pitched	
C.	Deep, pleasant, resonant voice which is melodious, resonating, but lower in pitch and intensity	
3.16 Nail (NL)		
A.	Hard, brittle, rough & differ in size from one another, bluish/grayish in contour	
B.	Soft, Strong, well formed, Lustrous, pink in colour	

C.	Strong, large, thick symmetrical & somewhat pale in colour	
3.17 Body temperature		
A.	Feels slightly cold on touch	
B.	Feels slightly warm on touch	
C.	Normal	
3.18 Shape of Palms and feet		
A.	Short and broad	
B.	Medium and slim	
C.	Long and broad	
3.19 Face		
A.	Small and broad with uneven features	
B.	Medium & oval with sharply defined features	
C.	Round, babbly and attractive with balance features	
4. Social or economical status		
4.01 Economy		
A.	Getting less outcome with hard work	
B.	Getting good outcome with moderate efforts	
C.	Enjoys lavishly and royal life	

SCORE SHEET FOR DETERMINATION OF PRAKRITI /UDALIYAL

Sl. No. of the subject _____

S.No	Observation code	OPTIONS			Identified Area (V/P/K)
		A	B	C	
1.	1.01	P	K	V	
2.	1.02	P	K	V	
3.	1.03	K	P	V	
4.	1.04	P	K	V	
5.	1.05	V	P	K	
6.	1.06	K	P	V	
7.	1.07	V	P	K	
8.	1.08	V	P	K	
9.	1.09	V	P	K	
10.	1.10	V	P	K	
11.	1.11	V	P	K	
12.	1.12	P	K	V	
13.	1.13	V	P	K	
14.	1.14	V	P	K	
15.	1.15	V	P	K	
16.	1.16	V	P	K	
17.	1.17	V	P	K	
18.	1.18	V	P	K	
19.	1.19	V	P	K	
20.	2.01	V	P	K	
21.	2.02	V	K	P	
22.	2.03	K	P	V	
23.	2.04	V	P	K	
24.	2.05	P	V	K	
25.	2.06	V	P	K	
26.	2.07	V	P	K	
27.	2.08	V	P	K	
28.	3.01	V	P	K	
29.	3.02	P	V	K	
30.	3.03	K	P	V	
31.	3.04	P	V	K	
32.	3.05	K	P	V	
33.	3.06	V	P	K	
34.	3.07	K	P	V	
35.	3.08	V	P	K	
36.	3.09	P	V	K	
37.	3.10	V	P	K	
38.	3.11	P	V	K	
39.	3.12	V	P	K	
40.	3.13	V	P	K	
41.	3.14	V	P	K	

42.	3.15	V	P	K	
43.	3.16	V	P	K	
44.	3.17	V	P	K	
45.	3.18	V	P	K	
46.	3.19	V	P	K	
47.	3.12	V	P	K	
48.	4.01	V	P	K	
Individual Score of V P K		V	P	K	
Percentage of V P K		V	P	K	
Type of Prakriti /Udaliyal					

[7] UYIR THATHUKKAL

A. VALI

	1. Normal	**2. Affected**
1. Praanan (Heart centre)	☐	☐
2. Abaanan (Matedial of muladhar centre)	☐	☐
3. Samaanan (Navel centre)	☐	☐
4. Udhaanan (Forehead centre)	☐	☐
5. Viyaanan (Throat centre)	☐	☐
6. Naahan (Higher intellectual function)	☐	☐
7. Koorman (Air of yawning)	☐	☐
8. Kirukaran (Air of salivation)	☐	☐
9. Devathathan (Air of laziness)	☐	☐
10. Dhananjeyan (Air that acts on death)	☐	☐

B. AZHAL

	1. Normal	2. Affected
1. Anala pittham (Gastric juice)	☐	☐
2. Prasaka pittham (Bile)	☐	☐
3. Ranjaka pittham (Haemoglobin)	☐	☐
4. Aalosaka pittham (Aqueous Humour)	☐	☐
5. Saathaka pittham (Life energy)	☐	☐

C. IYYAM

	1. Normal	2. Affected
1. Avalambagam (Serum)	☐	☐
2. Kilethagam (saliva)	☐	☐
3. Pothagam (lymph)	☐	☐
4. Tharpagam (cerebrospinal fluid)	☐	☐
5. Santhigam (Synovial fluid)	☐	☐

[8] UDAL THATHUKKAL

INCREASED SAARAM (CHYLE)		DECREASED SAARAM(CHYLE)	
Loss of appetite	☐	Loss weight	☐
Excessive salivation	☐	Tiredness	☐
Loss of perseverance	☐	Dryness of the skin	☐
Excessive heaviness White musculature	☐	Diminished activity of the sense organs	☐
Cough, dysponea, excessive sleep	☐		
Weakness in all joints of the body	☐		

A. SAARAM: INCREASED ☐ DECREASED ☐

INCREASED CENNEER(BLOOD)		DECREASED CENNEER(BLOOD)	
Boils in different parts of the body	☐	Anemia	☐
Anorexia	☐	Tiredness	☐
Mental disorder	☐	Neuritis	☐
Spleenomegaly	☐	Lassitude	☐
Colic pain	☐	Pallor of the body	☐
Increased pressure	☐		
Reddish eye and skin	☐		
Jaundice	☐		
Haematuria	☐		

B. CENNEER: INCREASED ☐ DECREASED ☐

INCREASED OON (MUSLE)		DECREASED OON (MUSLE)	
Cervical lymphadenitis	☐	Impairment of sense organs	☐
Vernical ulcer	☐	Joint pain	☐
Tumour in face ,abdomen, thigh, genitalia	☐	Jaw, thigh and genitalia gets shortened	☐
Hyper muscular in the cervical region	☐		

C. OON: INCREASED ☐ DECREASED ☐

INCREASED KOZHUPPU (ADIPOSE TISSUE)		DECREASED KOZHUPPU (ADIPOSE TISSUE)	
Cervical lymph adenitis	☐	Pain in the hip region	☐
Vernical ulcer	☐	Disease of the spleen	☐
Tumour in face, abdomen, thigh, genitalia	☐		
Hyper muscular in the cervical region	☐		
Dyspnoea	☐		
Loss of activity	☐		

D. KOZHUPPU: INCREASED ☐ DECREASED ☐

INCREASED ENBU (BONE)	DECREASED ENBU (BONE)
Growth in bones and teeth ☐	Bones diseases ☐ Loosening of teeth ☐ Nails splitting ☐ Falling of hair ☐

E. ENBU: INCREASED ☐ DECREASED ☐

INCREASED MOOLAI (BONE MARROW)	DECREASED MOOLAI (BONE MARROW)
Heaviness of the body ☐ Swollen eyes ☐ Swollen phalanges chubby fingers ☐ Oliguria ☐ Non healing ulcer ☐	Osteoporosis ☐ Sunken eyes ☐

F. MOOLAI: INCREASED ☐ DECREASED ☐

INCREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)	DECREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)
Infatuation and lust towards women / men ☐ Urinary calculi ☐	Failure in reproduction ☐ Pain in the genitalia ☐

G. SUKKILAM/SURONITHAM: INCREASED ☐ DECREASED ☐

[9] MUKKUTRA MIGU GUNAM

I. Vali Migu Gunam	**1. Present**	**2. Absent**
1. Emaciation	☐	☐
2. Complexion – blackish	☐	☐
3. Desire to take hot food	☐	☐
4. Shivering of body	☐	☐
5. Abdominal distension	☐	☐
6. Constipation	☐	☐
7. Insomnia	☐	☐
8. Weakness	☐	☐
9. Defect of sense organs	☐	☐
10. Giddiness	☐	☐
11. Lake of interest	☐	☐

II. Pitham Migu Gunam	**1. Present**	**2. Absent**
1. Yellowish discolouration of skin	☐	☐
2. Yellowish discolouration of the eye	☐	☐
3. Yellow coloured urine	☐	☐
4. Yellowishness of faeces	☐	☐
5. Increased appetite	☐	☐
6. Increased thirst	☐	☐
7. Burning sensation over the body	☐	☐
8. Sleep disturbance	☐	☐

III. Kapham migu gunam	**1. Present**	**2. Absent**
1. Increased salivary secretion	☐	☐
2. Reduced activeness	☐	☐
3. Heaviness of the body	☐	☐
4. Body colour – fair complexion	☐	☐
5. Chillness of the body	☐	☐
6. Reduced appetitie	☐	☐
7. Eraippu	☐	☐
8. Increased sleep	☐	☐

[10]**. NOIUTRA KALAM**

1. Kaarkaalam (Aug15-Oct14)	☐	2.Koothirkaalam (Oct15-Dec14)	☐
3. Munpanikaalam (Dec15-Feb14)	☐	4.Pinpanikaalam (Feb15-Apr14)	☐
5. Ilavanirkaalam (Apr15-June14)	☐	6.Muthuvenirkaalam (June15-Aug14)	☐

[11]**. NOI UTRA NILAM**

1. Kurunji (Hilly terrain)	☐	2. Mullai (Forest range)	☐	3. Marutham (Plains)	☐
4. Neithal (Coastal belt)	☐	5. Paalai (Desert)	☐		

[12].Date of Birth ☐☐ ☐☐ ☐☐☐☐

[13]. Time of Birth ☐ AM ☐ PM ☐

[14]. Place of Birth: _____

[15]. **Rasi (Zodiac Sign)**

1. Mesam ☐	2. Rishabam ☐	3.Midhunam ☐
4. Katakam ☐	5. Simmam ☐	6.Kanni ☐
7.Thulam ☐	8.Viruchiham ☐	9.Dhanusu ☐
10. Maharam ☐	11.Kumbam ☐	12. Meenam ☐

[16]**.** Natchathiram(birth stars):

1. Aswini ☐	2.Barani ☐	3.Karthikai ☐
4.Rohini ☐	5.Mirugaseeradam ☐	6. Thiruvathirai ☐
7. Punarpoosam ☐	8. Poosam ☐	9. Ayilyam ☐
10. Makam ☐	11.Pooram ☐	12. Utthiram ☐
13. Astham ☐	14.Chithirai ☐	15. Swathi ☐
16. Visakam ☐	17. Anusam ☐	18.Kettai ☐
19 Moolam ☐	20. Pooradam ☐	21. Uthiradam ☐
22.Thiruvonam ☐	23.Avittam ☐	24. Sadayam ☐
25. Poorattathi ☐	26.Uthirattathi ☐	27. 28. Not ☐

Date : **P.G Student** **Lecture**

ANNEXURE-III

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VATHAM

FORM-III-LABORATORY INVESTIGATIONS

1. O.P No: _____ Lab.No_____ Serial No_____

2. Name: _____

3.Date of birth : | | | | | | | | |
D D M M Y E A R

4. Age : _____ years

5. Date of assessment: _____

BlOOD

1. TC _____ Cells/cu mm

2. DC
P___% L _____% E _____% M _____% B_____%

3. Hb _____ gms%

4. ESR At 30 minutes _____ mm At 60 minutes _____mm

5. Blood Sugar-F_____mgs%

6. Blood Sugar-PP _____mg%

7. Serum Cholesterol _____mgs %

8. HDL _____ mgs%

9. LDL _____mgs%

10. Triglycerides _____mgs%

11. Blood Urea _____mgs%

12. Serum Creatinine _____mgs%

URINE

1. Neerkuri _____
2. Neikuri _____
3. Sugar F&PP _____
4. Albumin _____
5. Deposits _____

MOTION

1. Ova
2. Cyst
3. Occult blood

SPECIAL INVESTIGATION

1. SIGMOIDOSCOPY

Date : **P.G Student** **Faculty**

ANNEXURE - IV

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VATHAM

FORM IV - INFORMED WRITTEN CONSENT FORM

I ……..exercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled " A study on "MIRUTTHU VAATHAM". I may be asked to give urine and blood samples during the study.

I have been informed about the study to my satisfaction by the attending investigator about the purpose of this trial, the nature of study and the laboratory investigations. I also give my consent to publish my study results in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

Signature /thumb impression of the patient :

Date :

Name of the patient :

Signature of the investigator :

Date :

Head of the Department :

§¾º¢Â º¢ò¾ ÁÕòÐÅ ¿¢ÚÅÉõ, ¦ºý ¨ É-47.

§¿¡ö ¿¡¼ø Ð¨È

“Á¢ÕòÐÅ¡¾õ §¿¡ö ¸½¢ôÒ Ó¨È ÁüÚ õ ÌÈ¢Ì ½ í ¸¨ńÀüÈ¢Â µ÷ ¬ö×”

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±ýɼõ ֏ó¾ÁÕòÐÅ ¬öÅ¢ý ¸¡Ã½ò¨¾Ôõ, ÁÕòÐÅ ¬ö×ì Ü¼ ÀÃ¢§º¡¾¨É¸û ÀüÈ¢ ¾¢Õô¾¢ «ń¢ì Ìõ Å¨¸Â¢ø ¬ö× ÁÕòÐÅÃ¡ø Å¢ńì¸¢ì ÜÈôÀð¼Ð.

¿¡ý ֏ó¾ ÁÕòÐÅ ¬öÅ¢ý §À¡Ð ¸¡Ã½õ ±Ð×õ ÜÈ¡Áø, ±ô¦À¡ØÐ §Åñ ÎÁ¡É¡Öõ ֏ó¾ ¬öÅ¢Ä¢ÕóÐ ±ý¨É Å¢ÎÅ¢òÐ ¦¸¡ûÙõ ¯Ã¢¨Á¨Â ¦¾Ã¢ó¾¢Õì¸¢ý§Èý.

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ANNEXURE – IV – A

DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MIRUTTHU VATHAM
FORM IV- A - PATIENT INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess the diagnostic methods in Siddha methodology in MIRUTTHU VATHAM patients. Knowledge gained from this study would be of benefit to patients suffering from such conditions for the diagnosis and prognosis.

STUDY PROCEDURE:

You will be interviewed and examined as OP and IP patients at the study centre. At the first visit the physician will conduct a brief physical examination and assess the condition followed by Envagai thervu and routine blood and urine analysis. After matching the inclusion criteria you will be included in this study and you will be examined on the basis of Envagai thervu.

POSSIBLE RISK:

During this study there may be a minimum pain to you while drawing blood sample.

CONFIDENTIALLITY:

Your medical records will be treated with confidentiality and will be revealed only to other doctors / scientists. The results of this study may be published in a scientific journal, but you will not be identified by your name.

YOUR PARTICIPATION AND YOUR RIGHTS:

Your participation in this study is voluntary and you may be withdrawn from this study anytime without having to give reasons for the same. You will be informed about the findings that occur during the study. If you do agree to take part in this study, your health record will need to made available to the investigators. If you don't wish to participate at any stage, the level of care you receive will in no way to be affected.

The Ethics committee cleared the study for undertaking at OPD and IPD, NIS. Should any question arise with regards to this study you contact following person

P.G student:
Dr. K.Kanchana I-Year
Department of Noi Naadal
National Institute of Siddha
Chennai-600 047.

§¾ºtÂ ºtò¾ ÁÕòÐÅ ¿tÚÅÉõ, ¦ºý ¨ É-47.

§¿¡ö ¿¡¼ø Ð¨È

“Átõòðå¡¾õ §¿¡ö ¸½tôÒ Ó¨È áüúõ ÌÈtÌ½í¸¨ºÀüÈtÂµ÷ ¬ö×”

<u>§¿¡Â¡ºtÂtý ¾¸Åø ÀÊÅõ</u>

¬öÅtý §¿¡ì¸Óõ ÀÂÛõ:

¾¡í¸û Àí§¸üì Ìõ ©ùÅ¡ö× “Átõòðå¡¾õ §¿¡ö ¸½tôÒ Ó¨È áüúõ ÌÈtÌ½í¸¨ºÀüÈtÂµ÷ ¬ö×” ºtò¾ ÁÕòÐÅ Ó¨ÈÂtø §¿¡¨Â ¸½tôÀ¾ü¸¡É µ÷ ¬ö×Ó¨È. ©ùÅ¡ö× ¾í¸ºtý §¿¡ö¸½tô¨À ÀüÈtÔõ §¿¡Âtý §À¡ì¨¸ ÀüÈtÔõ «ÈtÂ ¯¾×õ.

¬ö× Ó¨È:

¾¡í¸û §¿÷¸¡½ø áüúõ ÀÃt§º¡¾¨É¸ºtý ãÄõ ¯û§¿¡Â¡ºt, ¦Åºt§¿¡Â¡ºt ÀtÃtÅtø ¬ö× ¦ºöÂôÀÎÅ÷¸û. Ó¾ø §¿÷¸¡½Ätý§À¡Ð ¬öÅ¡ºtÃ¡ø ¯¼ø ÀÃt§º¡¾¨É, ¿÷, ©Ãò¾õ, áüúõ ÁÄõ ÀÃt§º¡¾¨É ¦ºöÐ ÌÈtôÀtð¼ ÌÈtÌ½í¸û ©ÕôÀtý ©ùÅ¡öÅtü¸¡¸±ÎòÐì¦¸¡ûºtôÀÎÅ÷¸û.

§¿Õõ ¯À¡¨¾¸û:

©ùÅ¡öÅtø ©Ãò¾ ÀÃt§º¡¾¨É ì¸¡¸ ©Ãò¾õ ±Îì Ìõ§À¡Ð ºtÈ¾º×ÅÄt²üÀ¼Ä¡õ.

Áó¾½õ :

¾í¸ºtý ÁÕòÐÅ ¬Å½í¸û «¨ÉòÐõ ÁÕòÐÅ÷, ¬öÅ¡º÷ «øÄ¡¾ ÀtÈÃt¼õ ¦¾ÃtÅtì¸ôÀ¼Á¡ð¼¡Ð.

§¿¡Â¡ºtÂtý Àí¸ºtôÒõ ¯Ãt¨Á¸Ùõ:

©ùÅ¡öÅtø ¾í¸ºtý Àí§¸üÒ ¾ýÉtî¨ºÂ¡ÉÐ. ©ùÅ¡öÅtø ¾¡í¸û ´òÐ¨Æì¸ ©ÂÄÅtø¨Ä¦ÂÉtø ±ô¦À¡ØÐ §Åñ ÎÁ¡É¡Öõ ¸¡Ã½õ ±Ð×õ ÜÈ¡Áø Åt Ä¸tì¦¸¡ûºtÄ¡õ. ©ùÅ¡öÅtý§À¡Ð «ÈtÂôÀÎõ ¾¸Åø¸û¾í¸Ùì Ì¦¾Ãt Åtì¸ôÀÎõ. §¿¡Â¡ºtÂtý ´ôÒ¾Öì¸t½í¸ §¿¡ö¸½tôÒ ÅtÅÃí¸¨º¬öÅ¡º÷ ÀÂýÀÎò¾ì¦¸¡ûÅ¡÷. §¿¡Â¡ºt ¬öÅtÉ¨¼§Â ´òÐ¨Æì¸ ÁÚò¾¡Öõ ±ó¾ ¿t¨ÄÂtÖõ §¿¡Â¡ºt¨Â ¸ÅÉtì Ìõ Åt¾õ À¡¾tì¸ôÀ¼ Á¡ð¼Ð. ¿tÚÅÉ ¦¿ÈtÓ¨È ÌØÁõ (Institutional Ethical committee) §Áü¸ñ¼ ¬öÅt¨É §Áü¦¸¡ûº ´ôÒ¾ø «ºtòÐûºÐ.

¬ ö× Ì È¢ò¾ ºó§¾¸ í ¸û ֍ÕôÀ¢ý ¸¢ú¸ ñ¼ ¿À¨Ã ¦¾¡¼÷Ò ¦¸¡ûǧ×õ.

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ÁÕ. ¸.¸¡ï ºÉ¡
(Ó¾ø ÅÕ¼õ)

§¿¡ö ¿¡¼ø Ð¨È

§¾ºÂ º¢ò¾ ÁÕòÐÅ ¿¢ÚÅÉõ,

¦ºý¨É-47.

Á¢ý « ï ºø –drkanchana15**@gmail.com**

¦¾¡¨Ä§À º¢ ± ñ - 9952827840

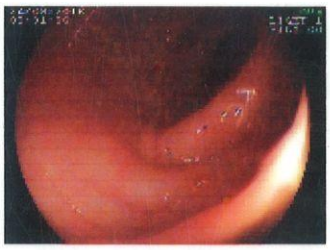
AARTHI ADVANCED CT,MRI SCAN

60,100-FEET ROAD,VADAPALANI
622,T.H.ROAD,TONDIARPET
CHENNAI - 6000026
Phone No: 044-24722421,24722420,25971717
WebSite: www.aarhiscan.com
Email_ID: info@aarthiscan.com

Patient ID: 2016090011
Name: Mr. MUTHU SAMY A
Age: 41 Years
Sex: M

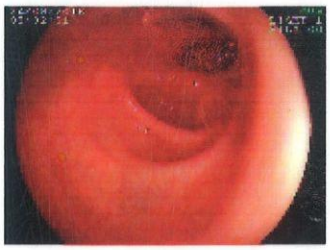
Ref By: NATIONAL INSTITUTE OF SIDDHA
Study: sigmoid scopy
Examined By: Dr. RAMESHBABU R
Date: 24-Sep-2016

INSTRUMENT : FUJINON EC -250WL5



Preparation FAIR

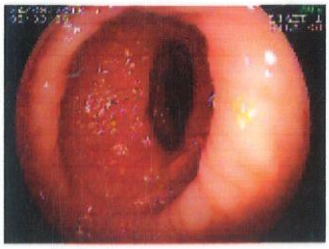
SIGMOID : Normal



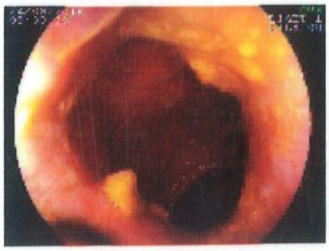
RECTUM : Normal

ANAL CANAL : Normal

IMPRESSION : Normal Study.



Signature



ScopyDoc 91-20-25443913

AARTHI ADVANCED CT,MRI SCAN

60,100-FEET ROAD,VADAPALANI
622,T.H.ROAD,TONDIARPET
CHENNAI - 6000026
Phone No: 044-24722421,24722420,25971717
WebSite: www.aarhiscan.com
Email_ID: info@aarthiscan.com

Patient ID: 2016080013
Name: Mr. SAMBATH KUMAR V
Age: 21 Years
Sex: M

Ref By: NATIONAL INSTITUTE OF SIDDHA
Study: sigmoid scopy
Examined By: Dr. RAMESHBABU R
Date: 20-Aug-2016

INSTRUMENT : FUJINON EC -250WL5

Preparation Good

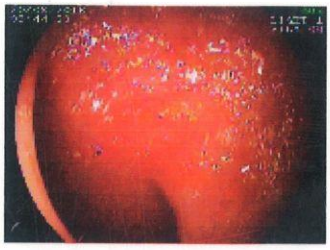
SIGMOID : Normal

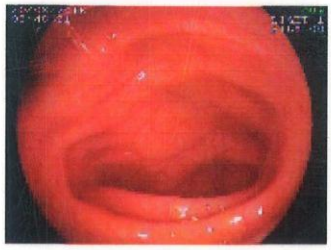
RECTUM : Normal

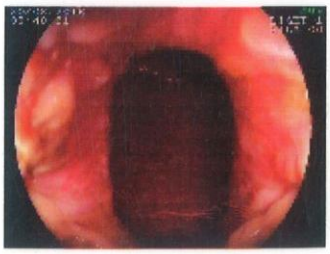
ANAL CANAL : Normal

IMPRESSION : Normal Study.

Signature







ScopyDoc 91-20-25443913